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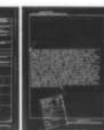
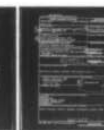
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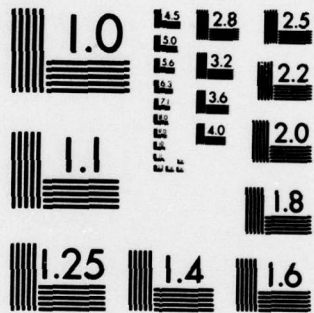
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AIRCRAFT MAINTENANCE PERSONNEL

Joseph W. Putt, Captain, USAF  
Scott K. Williams, Captain, USAF

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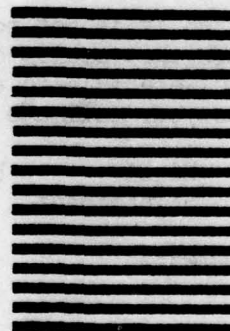
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A current problem facing Air Force managers is the retention of qualified enlisted aircraft maintenance personnel. Little research has been directed toward developing a conceptual framework of voluntary turnover of Air Force personnel. The present research developed a conceptual model of turnover based on a synthesis of theoretical frameworks proposed in the sociological and industrial psychological literature. The model was then tested using existing data extracted from the 1977 Air Force Quality of Life survey. The study focused on male enlisted aircraft maintenance personnel from the 32XXX, 42XXX, and 43XXX career fields with two to nine years of service. The basic conceptual structure of the model was confirmed with one modification, which was incorporated in a revised conceptual model. The function of intraorganizational communication was found to be significantly different from the originally hypothesized relationship. In addition, perceived opportunity for civilian employment was confirmed as a significant intervening variable between satisfaction and expressed career intent. Recommendations are made for the development of a new survey instrument with which to further develop the model as an aid in personnel policy decisions.

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**TURNOVER OF AIR FORCE ENLISTED AIRCRAFT  
MAINTENANCE PERSONNEL**

**A Thesis**

**Presented to the Faculty of the School of Systems and Logistics  
of the Air Force Institute of Technology**

**Air University**

**In Partial Fulfillment of the Requirements for the  
Degree of Master of Science in Logistics Management**

**By**

**Joseph W. Putt, BS  
Captain, USAF**

**Scott K. Williams, BA  
Captain, USAF**

**June 1979**

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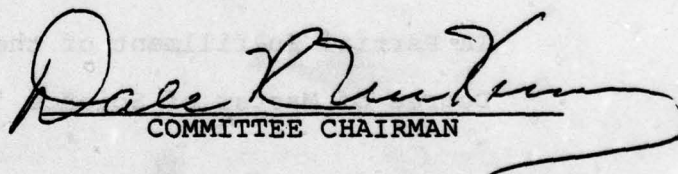
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## CHAPTER I

### INTRODUCTION

#### Overview and Justification

Turnover of Air Force personnel continues to be a subject of importance and a major topic of discussion at all levels of Air Force management: with the advent of the All-Volunteer Force policy, the Air Force is now forced to compete actively with civilian organizations for manpower. Turnover problems within the military have become more like those of civilian organizations (13:199).

The Air Force's competition with civilian organizations for manpower is manifested by retention problems. Lieutenant General B. L. Davis, Deputy Chief of Staff for Personnel, in discussing Air Force retention problems noted that ". . . while the current forty-seven percent first-term re-up rate looks good, it translates into only about 11,500 people signing for another hitch [8:72]," which is a drop from the 20,000 reenlistments in 1971 (8:72). Once recruited, qualified individuals should be retained to reduce future recruitment and training costs for replacements.

A Navy study discovered that because of attrition 1.5 high school graduates had to be recruited and trained



to insure at least one individual was available for reenlistment at the end of an initial four-year enlistment period. The estimated cost of insuring one individual available for reenlistment was \$41,000 in 1977 (28:346). Assuming that Navy and Air Force enlisted attrition rates are similar, the Air Force with a 47 percent reenlistment rate for first-term enlisted personnel would need to recruit and train three high school graduates at a cost of approximately \$82,000 to assure two personnel were available for reenlistment. Even higher costs would result with the more technically trained recruit, such as an aircraft maintenance technician. Aircraft maintenance personnel require more technical training than most other career fields; therefore, special emphasis should be placed on retaining these highly qualified personnel in an effort to save money and keep training and recruitment costs low. The average aircraft maintenance specialist does not become productive until two to three years of service because the field is highly technical (29:p.2-3). With the current four-year enlistment policy, these technicians are productive only for a quarter to a half of their initial enlistment. If they elect not to reenlist, the Air Force has lost valuable technical skill and training to the civilian world.

Problems such as this are more easily solved when managers at all levels have a better understanding of the

factors involved in the turnover decision. The first step in understanding organizational turnover is to review the literature on the subject. An extensive amount of research has been done in the area of turnover. Basically, these studies have shown several causal factors (termed determinants). Such determinants are pay, promotion, and level of peer group integration, to name a few. In addition, two intervening variables opportunity and satisfaction have been identified. The purpose of this research study was to determine if the previously determined relationships between determinants, intervening variables, and turnover hold when related to turnover of enlisted aircraft maintenance personnel. These causal relationships are described in Chapter II in the review of the March & Simon and the Price models of turnover. These models, described in Organizations (15) and The Study of Turnover (25), respectively, should help Air Force managers at all levels to better understand the environment of enlisted aircraft maintenance personnel turnover.

Figure 1 represents a conceptual model of the relationships between the determinants, intervening variables, and turnover as presented in the literature.

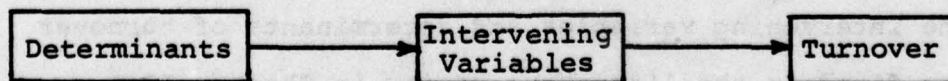


Fig. 1. Conceptual Model of Turnover



### Problem Statement

A need exists to determine if the relationships between the determinants, intervening variables, and turnover, as presented in the literature, hold when found in the context of enlisted aircraft maintenance personnel.

### Scope

There are many factors affecting organizational turnover identified in the literature. These factors are generally classified into two groups: determinants and intervening variables.

This study considered the determinants supported in the literature as aggregates. These aggregates are: conformity conflict, compatibility of the job and other roles, intraorganizational communication, perceived ease of intraorganizational transfer, individual factors, visibility of the individual, the number of organizations available, and the level of business activity and technology of the economy.

Two major intervening variables identified in the literature are satisfaction and opportunity. These two variables were considered intervening variables for the purposes of this study. The definitions and descriptions of the intervening variables and determinants of turnover can be found in the literature review in Chapter II.

The data base used for evaluating the relationships between the determinants, intervening variables, and turnover were extracted from the Headquarters United States Air Force, 1977 United States Air Force Quality Life Active Duty Air Force Personnel Survey. From that data base, correlations and causal relationships between variables were determined.

#### Research Objectives

From the relationships identified in the literature review between determinants, intervening variables, and turnover, five research objectives were developed. The objectives of this study were to determine the nature and strength of the relationships between:

1. The determinants of turnover and satisfaction
2. The determinants of turnover and expressed career intent
3. Satisfaction and expressed career intent
4. Opportunity and expressed career intent
5. Opportunity and satisfaction



## CHAPTER II

### LITERATURE REVIEW

#### Introduction

"... organizations are important because people spend so much of their time in them [15:2]." We become members and are subsequently influenced by organizations early in life. As children, nearly a third of our waking lives is spent in the environment of the school organization. As adults, a commensurate proportion of our time is spent with the organization which employs us. It is through organizations that we earn our livelihoods, gain and express our political and religious beliefs, and gain our education. Organizations even play a major role in our recreation and leisure time. There seems to be an organization for every humanly conceivable purpose. We join organizations that play major parts in our lives for many reasons and often withdraw from these organizations for equally as many reasons (13; 15; 25).

Withdrawal or disengagement from organizations is called turnover, turnover being complete separation from an organization. Turnover has a negative impact upon organizational effectiveness. Turnover results in costs to the organization in that turnover requires replacement



and training of a new employee, plus it may result in a loss of production as the new employee gains in job proficiency (17:200-218).

There are several types of turnover. For this paper, only voluntary turnover was considered. "Voluntary turnover is individual movement across the membership boundary of a social system which is initiated by the individual [25:9]." The terms "quits" and "resignations" are also used in reference to turnover (25:9). Throughout this paper, the term *turnover* was used to mean voluntary turnover.

Because turnover can represent a costly process to organizations, many research studies have examined the factors that influence turnover (13; 14; 15; 18; 24; 25; 26; 30). Nearly all the research studies deal with various factors which can lead to turnover. Some of these factors are personal to the individual, some are a direct result of the organization, while still others are directly related to the job (11; 13; 14; 15; 24; 25). To get an overall perspective of turnover, it is necessary to have some framework within which to operate. The literature dealing with turnover is voluminous and somewhat piecemeal in nature. Price's The Study of Turnover, and March & Simon's Organizations present thorough reviews of the literature and conceptual models of turnover in organizations. A brief examination of these two reviews and their

Pay. Pay is defined as ". . . the money, fringe benefits, and other commodities that have financial value which organizations give to employees in return for their service [14:1]." Pay is usually referred to as the amount of money received because "fringe benefits" are difficult to calculate (25:68). The propositional statement for this determinant of turnover is: "Successively higher amounts of pay will probably produce successively lower amounts of turnover [25:68]."

Integration. The second determinant of turnover is integration. "Integration is the extent of participation in primary and/or quasi-primary relationships [25:70]." A primary relationship is represented by membership in a small, cohesive, and rewarding group, while a quasi-primary relationship is a type of primary relationship represented by the term "close friend" (25:71). Price's propositional statement for the determinant integration is: "Successively higher amounts of integration will probably produce successively lower amounts of turnover [25:70]."

Instrumental Communication. The third determinant of turnover is instrumental communication. Instrumental communication is "The transmission of information directly related to role performance . . . [25:74]." Instrumental communication would be a supervisor explaining the requirements of a job to a worker (25:74). The propositional

conceptual models should provide some insights into the various factors that influence turnover within organizations.

### Two Models of Turnover

#### Price Model of Turnover

James L. Price's The Study of Turnover is a review of turnover and a conceptual model of how the factors of turnover are interrelated. Price has conceptualized turnover as the interrelationship of the determinants, intervening variables, and correlates (25:3-91). These determinants, intervening variables, and correlates are briefly introduced. Then a brief examination of their interrelationships follows:

Determinants. Price presented a set of nine determinants of turnover. A determinant of turnover is an ". . . analytical variable believed to produce variations in turnover [25:67]." These determinants are included in causal statements called "propositions" (25:67). Five of the determinants are supported strongly by the literature. These are: pay, integration, instrumental communication, formal communication, and centralization. Four of the determinants are termed weak determinants and they are: routinization, professionalization, upward mobility, and distributive justice. Each of Price's nine determinants is presented with a brief explanation.



statement of the determinant instrumental communication is: "Successively higher amounts of instrumental communication will probably produce successively lower amounts of turnover [25:73]." Instrumental communication is a subset of formal communication.

Formal Communication. Formal communication is the fourth determinant of turnover. Formal communication is information transmitted through official channels to the entire organization. "Successively higher amounts of formal communication will probably produce successively lower amounts of turnover [25:73]," is the propositional statement of the determinant formal communication.

Centralization. The fifth determinant of turnover is centralization. Centralization is the extent ". . . to which power is concentrated in a social system [25:76]." The highest levels of centralization would be represented by a single individual having all the power. The lowest levels of centralization are represented by the power being distributed equally among all the members of the organization (25:76). The propositional statement for the centralization determinant is: "Successively higher amounts of centralization will probably produce successively higher amounts of turnover [25:76]."

Routinization. The sixth determinant of turnover is routinization. Routinization or task repetitiveness is ". . . the degree to which role performance in a social system is repetitive [25:88]." Organizations in their quest for efficiency through advanced technology ". . . often imposes severe constraints on personal actions and activities at work [24:162]." The propositional statement of the determinant routinization is: ". . . successively higher amounts of routinization will probably produce successively higher amounts of turnover [25:88]."

Upward Mobility. The seventh determinant of turnover advanced by the literature and Price is upward mobility. "Upward mobility is the amount of movement from low strata to high strata in a social system [25:88]." Upward mobility is commonly achieved through promotions and is ranked in terms of pay, power, and status. "Successively higher amounts of upward mobility will probably produce successively lower amounts of turnover [25:88]," is the propositional statement of the determinant upward mobility.

Professionalization. Professionalization is the eighth determinant of turnover. "Professionalization is the extent to which an occupation is based on knowledge and a service orientation [25:88]." Law and dentistry are common examples of professions. The propositional statement for the determinant professionalization is



". . . successively higher amounts of professionalization will probably produce successively higher amounts of turnover [25:88]."

Distributive Justice. The ninth and final determinant of turnover is distributive justice. "Distributive justice is the degree to which conformity is followed by the receipt of positive sanctions [25:88]." Distributive justice is similar to pay in that both are sanctions of the organization. Pay is the "amount" of the sanction while distributive justice is the "distribution" of the sanctions (18:88). The propositional statement for the distributive justice determinant is: "Successively higher amounts of distributive justice will probably produce successively lower amounts of turnover [25:88]."

Intervening Variables. Intervening variables are variables which intervene between the determinants and turnover. Price described two variables as intervening. The first, satisfaction, refers to a social psychological variable. The second, opportunity, is a structural variable. In the Price Model, the social psychological variable (satisfaction) precedes the structural variable (opportunity) (25:79).

Satisfaction. Satisfaction is defined as ". . . the degree to which the members of a social system have

positive affective orientation toward membership in the system [25:79]." Satisfaction as viewed by Price is a product of five determinants: pay, integration, instrumental communication, formal communication, and centralization. Satisfaction intervenes between these determinants and turnover. Price assumed that:

. . . individuals act to maximize their net balance of satisfactions over dissatisfactions. Dissatisfactions are subtracted from satisfactions to arrive at a net balance of satisfactions over dissatisfactions. The higher the net balance of satisfactions over dissatisfactions, the more likely it is that individuals will continue as members of organizations [25:80].

In Price's view, satisfaction and turnover are inversely related. As satisfaction rises, the less likely it is that turnover will occur.

Opportunity. The second intervening variable is opportunity. Opportunity is defined as ". . . the availability of alternative roles in the environment [25:81]." Alternative roles when related to organizations usually means jobs. Opportunity assumes knowledge of alternative roles and the ability and freedom to withdraw from the present organization. As an intervening variable, opportunity can only be considered after satisfaction. That is, if a member of an organization is dissatisfied and he perceives the opportunity for other jobs as high, he will probably leave the organization (25:82-83). "Dissatisfaction results in turnover only when opportunity



is relatively high [25:83]." Opportunity is external to the organization and can be used to explain variations in turnover only by an examination of the organization and its environment (25:83).

Correlates. Correlates differ from determinants in that they are indicative of correlation between variables as opposed to causation (25:24). Price defined correlates as "The empirical generalizations which . . . describe, whereas the propositions which embody the determinants explain [25:25]." Price identified nine correlates, three with strong support in the literature, three with medium support, and three with weak support. This paper has presented all nine but discussed only those with strong support.

Length of Service. A strongly supported correlate is length of service. The empirical generalization that links length of service to turnover is: "Members with low lengths of service usually have higher rates of turnover than members with high lengths of service [25:26]." That is, individuals who have stayed with organizations for long lengths of time generally do not withdraw.

Age. The second strongly supported correlate is age. It is strongly connected to length of service but it is different. Members of organizations may be of



similar age but differ in their lengths of service. The empirical generalization linking the correlate age to turnover is: "Younger members usually have higher rates of turnover than older members [25:28]."

Level of Employment. The third correlate strongly supported by the literature is level of employment. The first two correlates dealt with individuals while level of employment deals with society. The empirical generalization linking the correlate level of employment to turnover is: "Periods of high levels of employment usually have higher rates of turnover than periods with low levels of employment [25:29]." That is, when employment outside the organization is available, turnover tends to increase (25:30).

The following correlates have medium support in the literature: Level of Skill (blue-collar workers); Blue-collar and White-collar workers; and Country. The correlates with weak support in the literature are as follows: Education, Nonmanagers and Managers; Nongovernment and Government.

Level of Skill (Blue-collar workers). The empirical generalization of the correlate level of skill is: "Unskilled blue-collar members usually have higher rates of turnover than skilled blue-collar members [25:31]."

Blue-collar and White-collar Workers. The empirical generalization of the correlate blue-collar workers and white-collar workers is: "Blue-collar members usually have higher rates of turnover than white-collar members [25:32]."

Country. The empirical generalization of the correlate country is: "The United States has higher rates of turnover than other highly industrialized countries [25:34]."

Education. The empirical generalization of the correlate education is: "Better-educated members usually have higher rates of turnover than less-educated members [25:35]."

Nonmanagers and Managers. The empirical generalization of the correlate nonmanagers and managers is: "Nonmanagers usually have higher rates of turnover than managers [25:37]."

Nongovernment and Government. The empirical generalization of the correlate nongovernment and government is: "Nongovernment organizations usually have higher rates of turnover than government organizations [25:38]."

Interrelationship of Determinants, Intervening Variables and the Correlates. Figure 2 illustrates the discussion of

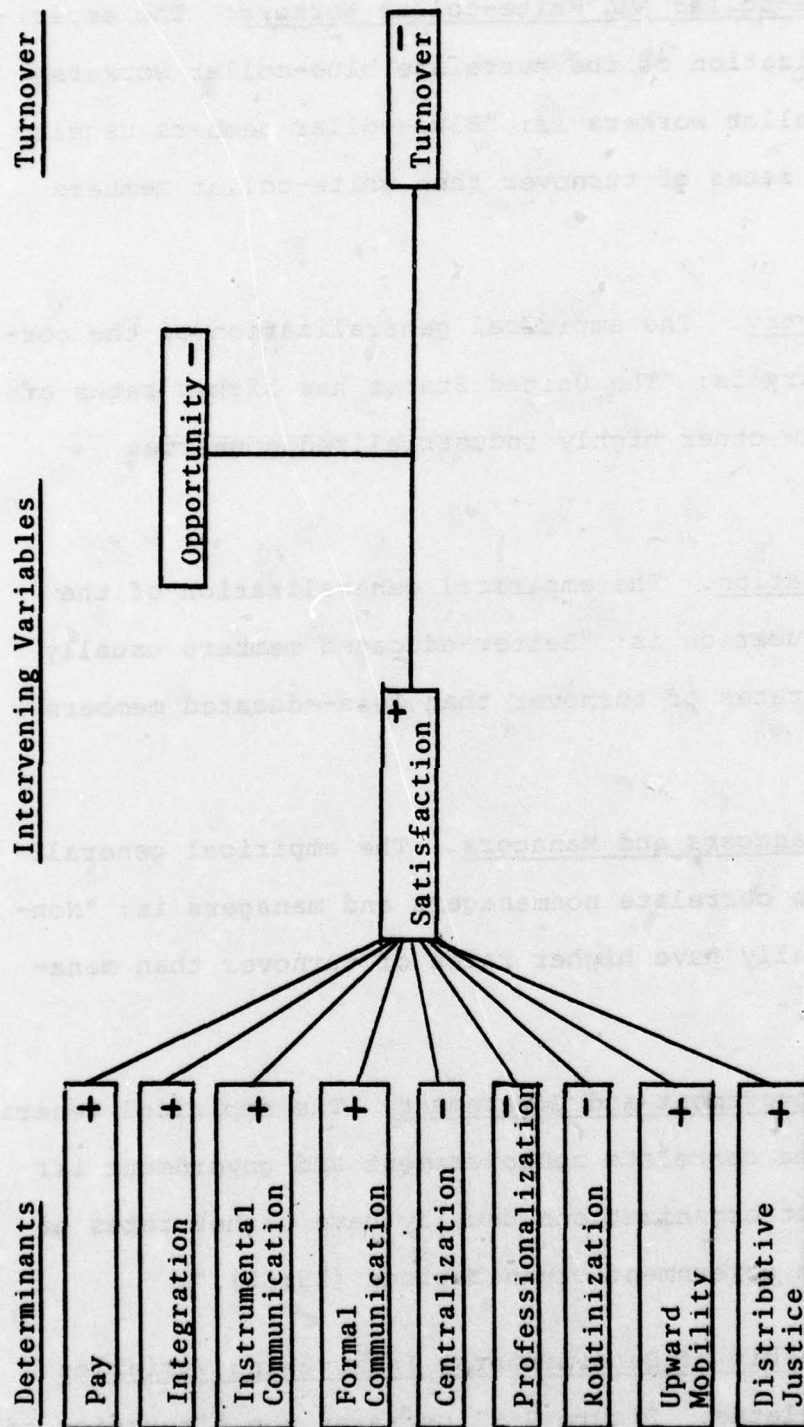


Fig. 2. Price Turnover Model (25:84)



the interrelationship of determinants, intervening variables, and the correlates. The positive and negative signs reflect the relationship of the variables to turnover. A positive sign indicates an inverse relationship with turnover. For example, as pay increases, turnover decreases. Conversely, a negative sign indicates a direct relationship to turnover. As centralization increases, turnover increases.

To examine the interrelationship of the correlates of turnover with the intervening variables and determinants, the first correlate, length of service, will serve as an adequate example. Length of service, when examined in light of the determinants, consistently reinforces the empirical generalization that "members with low lengths of service usually have higher rates of turnover than members with high levels of service [25:26]."

An individual with a low length of service generally will have lower pay, fewer close friends (integration), less information (instrumental and formal communication), and less power (centralization). He will not have had time to observe where there is upward mobility or distributive justice. The impact of the first five determinants on the first correlate will strongly affect an individual's satisfaction. If opportunity is high and satisfaction is low, an individual is more likely to withdraw and turnover increases (25:84).

The scope of this research did not permit an examination of each of the correlates to the determinants and intervening variables, but the Price model is an excellent conceptualization and deserves extended study and application.

#### March & Simon Model of Turnover

March & Simon's Organizations provides another conceptual model (Figure 3) of the interrelationship of the factors involved in the decision to participate (turnover). The decision to participate is the direct result of the inducements-contributions balance (15:93). Inducements are the ". . . payments made by (or through) the organization to its participants [15:84]," that is, wages and fringe benefits received by a participant from an organization. Contributions are the payments made by the participants to the organization (15:85), that is, productivity and services received by the organization from its participants. The inducements-contributions balance is based on the postulate that

Each participant will continue his participation in an organization only so long as the inducements offered him are as great or greater (measured in terms of his value and in terms of the alternatives open to him) than the contributions he is asked to make [15:84].

March & Simon stated that the inducements-contributions balance is a function of two major components. These components are the perceived ease of movement from

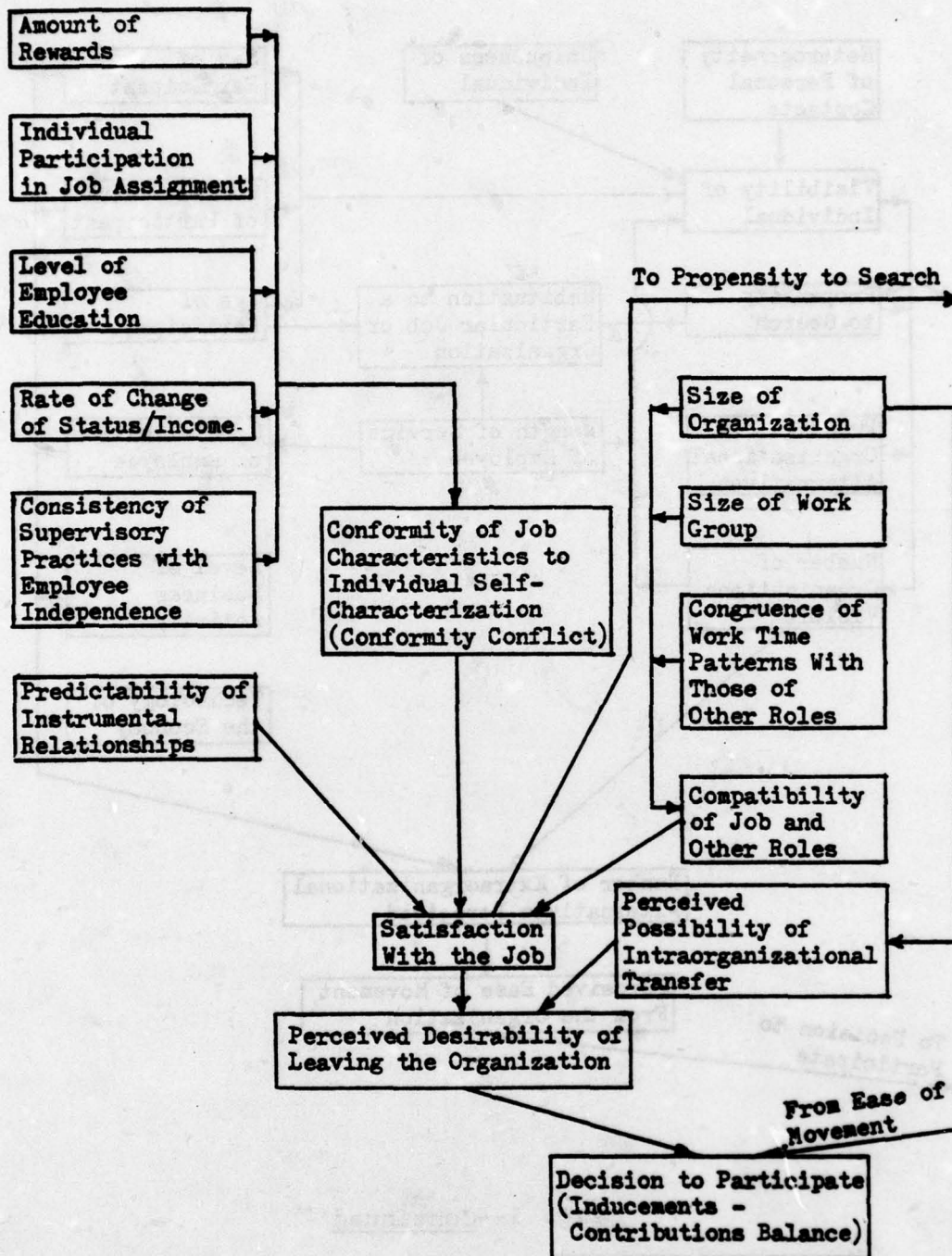


Fig. 3. March & Simon Turnover Model (15:99,106)



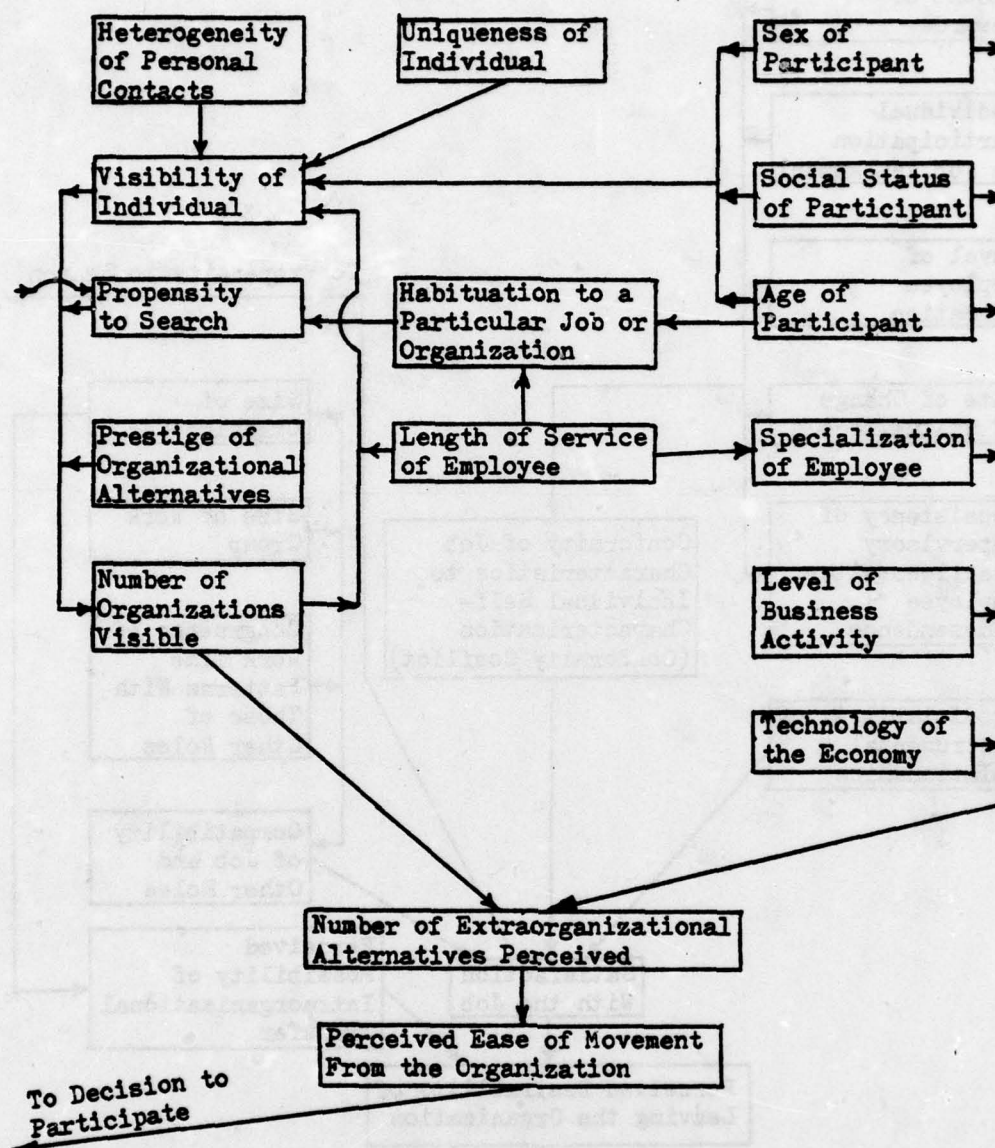


Fig. 3--Continued

the organization and the perceived desirability of leaving the organization and the various factors which influence these components (15:93).

Perceived Desirability of Leaving the Organization. The perceived desirability of leaving the organization is the first component influencing the decision to participate. The perceived desirability of leaving the organization is comprised of many interrelated major and minor factors. A brief discussion of these major and minor factors follows:

Satisfaction with the Job. The first major factor influencing the perceived desirability of leaving the organization is satisfaction with the job. March & Simon postulated that "The greater the individual's satisfaction with the job, the less likely the perceived desirability of movement [15:94]." Satisfaction with the job is a function of three minor factors. These minor factors follow.

Conformity Conflict. The first minor factor influencing satisfaction with the job is conformity conflict. Conformity conflict is defined as ". . . the disparity between reality and the ego-ideal held by the individual [15:94]." The postulate linking conformity conflict with satisfaction with the job is: ". . . the greater the conformity of job characteristics to

self-characterization held by the individual, the higher the level of satisfaction [15:94]." March & Simon defined five empirically supported subfactors that influence conformity conflict. The first subfactor is that ". . . the greater the consistency of supervisory practice with employee independence, the less the conflict between job characteristics and individual self-image [15:95]." Second, as the amounts of rewards (status or money) increase, the less the conflict between the individual's self-image and the job (15:96). Third, as the individual's participation in job assignment increases, the less conflict between the job and the individual's self-image (15:96; 30:252-254). Fourth, as the level of an employee's education increases, the greater the conflict between the job and the individual's self-image (15:96). The fifth and final subfactor influencing conformity conflict is the rate of change in status and/or income. March & Simon postulated that the ". . . greater the rate of change of status and/or income in the past, the greater the disparity between the job and the individual's self-image [15:97]."

#### Predictability of Instrumental Relationships.

March and Simon's second minor factor influencing satisfaction with the job is predictability of instrumental relationships. They postulated that ". . . the greater the



predictability of instrumental relationships, the higher the level of satisfaction [15:94]."

Compatibility of Job and Other Roles. The third and final minor factor influencing satisfaction with the job is ". . . the compatibility of work requirements with requirements of other roles [15:95]." An individual will select his work group memberships to minimize the conflict imposed on him by the differences in demands of those group memberships (15:95). The postulate linking the compatibility of work roles and other roles with satisfaction with the job is ". . . the greater the compatibility of work requirements with the requirements of other roles, the higher the level of satisfaction [15:95]." March & Simon cited three subfactors that influence this postulate. The first is that ". . . the greater the congruence of work time patterns with those of other roles, the greater the compatibility of job and other roles [15:97]." The second and third subfactors influencing compatibility of work roles and other roles had only a fair amount of empirical data to substantiate them and were presented as hypotheses. They are that the smaller the size of the work group or organization, the greater the compatibility of organizational roles and other roles (15:98).

Perceived Possibility of Intraorganizational Transfer. March & Simon developed a second major factor

influencing the perceived desirability of leaving the organization. This factor is the perceived possibility of intraorganizational transfer. A minor factor of the perceived possibility of intraorganizational transfer is the size of the organization. They postulated that the ". . . larger the organization, the greater the perceived possibility of intraorganizational transfer, and therefore, the less the perceived desirability of leaving the organization [15:99]."

Perceived Ease of Movement from the Organization. The second component of the decision to participate in an organization is the perceived ease of movement from the organization. The perceived ease of movement from the organization is comprised of one major factor and several interrelated minor factors.

Number of Extraorganizational Alternatives Perceived. The major factor which affects the perceived ease of movement from the organization is the number of extraorganizational alternatives perceived. The perceived ease of movement is increased when the number of positions or jobs that the participant is qualified for and/or willing to accept is increased in the organizations visible to him. Several minor factors influence the perceived number of extraorganizational alternatives. The level of business activity is first. The number of alternatives is directly



related to the level of business activity. Studies have supported the proposition that demand for labor is a major factor in voluntary turnover. ". . . in the 1948-1949 recession, the average voluntary separation in 39 companies surveyed, fell from 3.5% per month to 1.6% per month [15:101]." The second minor factor influencing the perceived number of extraorganizational alternatives is the sex of the participant. Male workers have a higher turnover rate than female workers though ". . . some data indicate a close relationship between female turnover rates and marriage [15:101]." The third minor factor is the age of the participant. Younger workers perceive an ease of movement not perceived by older workers (15:101). The fourth minor factor influencing the perceived number of extraorganizational alternatives is the social status of the participant. Higher status groups perceive movement to be less difficult than do lower status groups (15:102). The fifth minor factor influencing the perceived availability of outside alternatives is the technology of the economy. As technology increases, the perceived range of jobs a person is employable in increases, which increases turnover (15:102). The sixth minor factor affecting the perceived availability of outside alternatives is the specialization of the employee. Specialization is directly related to length of service. "The longer the length of service of the employee, the greater his specialization;



the greater his specialization, the fewer the extraorganizational alternatives perceived [15:102]."

The above factors, however, are not the only factors involved in the turnover of personnel. Visibility and uniqueness of the individuals and organizations are also factors. The larger the number of perceived extraorganizational alternatives available, the greater the probability of turnover. Visibility can be related to an organization or to an individual. Organizations gain prestige because of their size, growth rate, or their distinguishable product (15:103). Geographical location has an impact on organizational visibility; the greater the distance from the organizations, the less knowledge an individual will have of the organization. In contrast, individual visibility is influenced by other factors. Individual visibility is increased with the greater heterogeneity of personal contacts (15:103). For example, craft union members inform fellow members of possible positions during off-duty union activities. Therefore, the greater the visibility or uniqueness of the individual, the greater the number of extraorganizational alternatives perceived. The greater the visibility of the individual and alternative organizations, the greater the propensity to search for alternatives when job satisfaction is low. Conversely, the propensity to search will be restricted with greater habituation to a particular job or organization (15:105).

Habituation was defined as the tendency of a behavior pattern to become a habit; habituation to a particular job or organization is the habit of performing a particular job or working for an organization so long that the thought of changing the job or organization becomes remote (15:105).

#### Summary

In this chapter two conceptual models of turnover have been briefly examined to provide some insights into the various factors that influence turnover with organizations. Price, in his model, conceptualized turnover as the interrelationship of determinants, intervening variables, and correlates. March & Simon provided a second conceptual model within which the interrelationships of the factors of turnover could be examined. In the next chapter, these two conceptual models are compared, contrasted, and then synthesized to provide a broader conceptual framework within which turnover of Air Force enlisted maintenance personnel can be examined.

### CHAPTER III

#### COMPARISON AND SYNTHESIS OF THE MODELS

##### Comparison of the Models

In the comparison of the two models described in Chapter II, four areas of similarity or differences were noted. They are: (a) consideration of the environment external to the organization, (b) emphasis of conflict resolution, (c) emphasis on the individual, and (d) usefulness as a general theory of turnover.

##### Consideration of the External Environment

Both models consider factors external to the organization. Price used the intervening variable opportunity to include the environment external to the organization. March & Simon, on the other hand, used the level of business activity and technology of the economy as determinants of the number of extraorganizational alternatives perceived, which is then used as a determinant of their intervening variable, perceived ease of movement from the organization. Both models are, therefore, open-system models which are capable of reflecting change in the environment external to the organization.



### Emphasis on Conflict Resolution

March & Simon emphasized the need of an individual to reduce the conflict between the job and the individual's self-image. Price, however, did not include conflict resolution in his model of turnover. Each participant brings an "ego-ideal" or self-characterization of himself or herself to the job. If the organization and the job meet the needs of a participant, the lower his or her conflict level. The lower the level of conflict experienced by a participant in relation to his job, the higher his satisfaction with the job and the organization. Therefore, it is desirable to include conflict resolution as a variable in a turnover model.

### Emphasis on the Individual

These two models of turnover differ in their treatment of the individual factors that influence turnover. Price dealt with age, length of service, skill level, and level of education in his model of turnover as correlates of turnover. March & Simon presented the same individual factors but in the context of an individual environment. March & Simon also included a factor concerned with the uniqueness of the individual. Since the decision to participate or withdraw is an individual decision made in the context of the individual's environment, the March & Simon

model seems a more reasonable and desirable approach to turnover.

#### Usefulness as a General Theory

Both models of turnover have much to offer in the way of explanation of the factors which determine whether an individual will withdraw from an organization. The Price model is somewhat more limited than the March & Simon model in that Price limited his model to those determinants and intervening variables which have consistent support in the literature. Many other variables may well be involved beyond those discussed and/or supported by past research. Neither model takes into consideration all the variables involved in the decision to participate, such as demographic factors and marital status, nor should a general model necessarily consider every factor. Perhaps the most difficult factors to measure are those variables related to the external environment. Nearly all the variables presented by March & Simon have had extensive research conducted on them over the past twenty years, much of which supports their model. Those variables not supported by research, as a rule, make intuitive good sense. These variables will be included in the synthesized model because they provide a good conceptual framework of the turnover environment. The March & Simon model, despite its limitations, goes a long

way in providing a general and theoretical model of turnover.

Despite the limitations inherent in the modeling process, either model, or a synthesis of both, is useful in depicting the major factors in the decision to participate. Managers at all levels are constantly aware of the costs of organizational turnover. The synthesis of the models presented below will provide valuable insights into the turnover process.

### Synthesis of the Models

#### Intervening Variables

Satisfaction. March & Simon presented the perceived desirability of leaving the organization as an intervening variable in their model of turnover. The perceived desirability of leaving the organization intervenes between satisfaction with the job, the perceived possibility of intraorganizational transfer, and the decision to participate (turnover). Price considered satisfaction as an intervening variable in his model of turnover. Satisfaction, as defined by Price, encompasses satisfaction with the job as well as satisfaction with the organization and satisfaction with the individual's environment. Satisfaction, as defined by Price, was considered as one of the intervening variables in the synthesized model since this

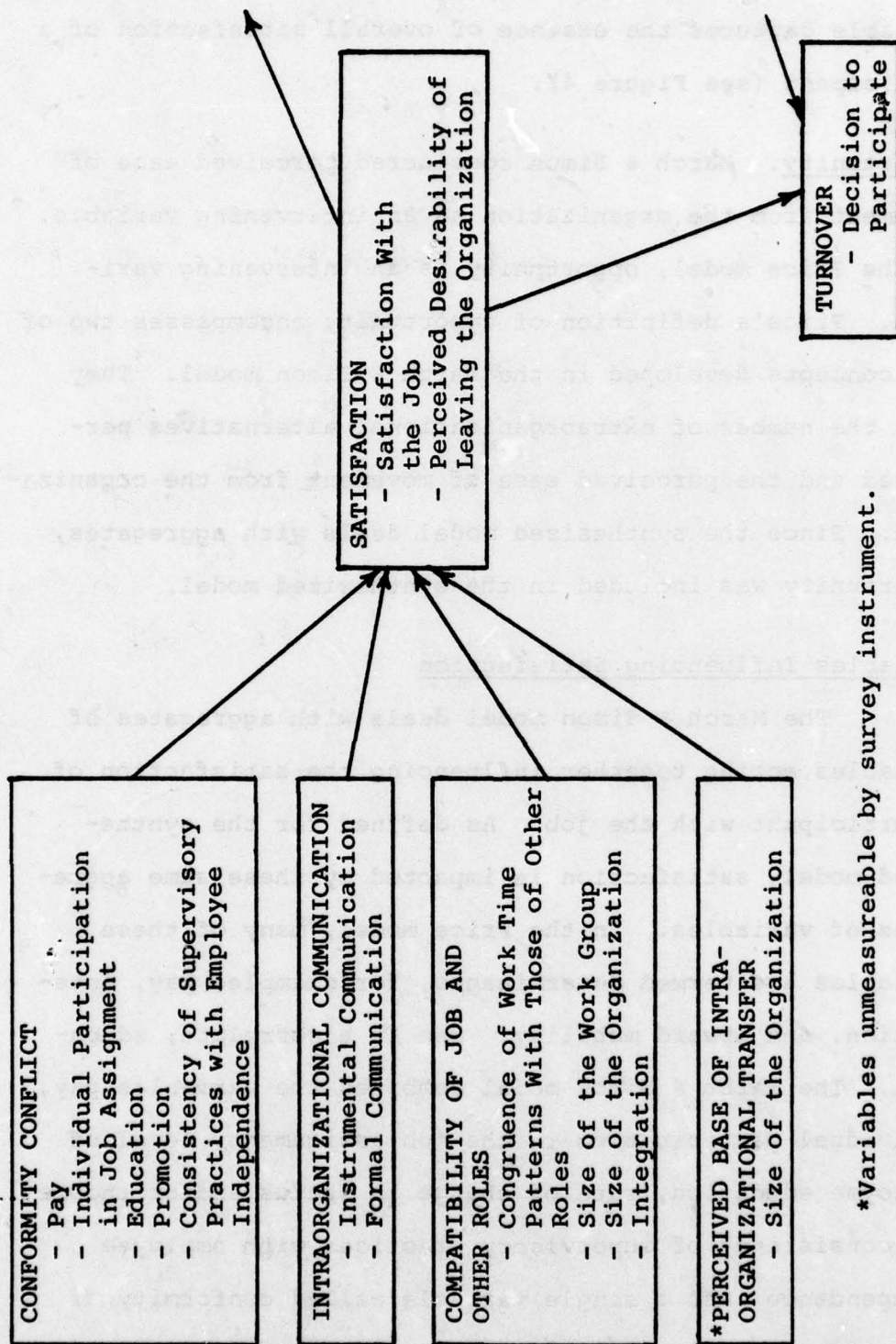


variable captures the essence of overall satisfaction of a participant (see Figure 4).

Opportunity. March & Simon considered perceived ease of movement from the organization as an intervening variable. In the Price model, opportunity is an intervening variable. Price's definition of opportunity encompasses two of the concepts developed in the March & Simon model. They are: the number of extraorganizational alternatives perceived and the perceived ease of movement from the organization. Since the synthesized model deals with aggregates, opportunity was included in the synthesized model.

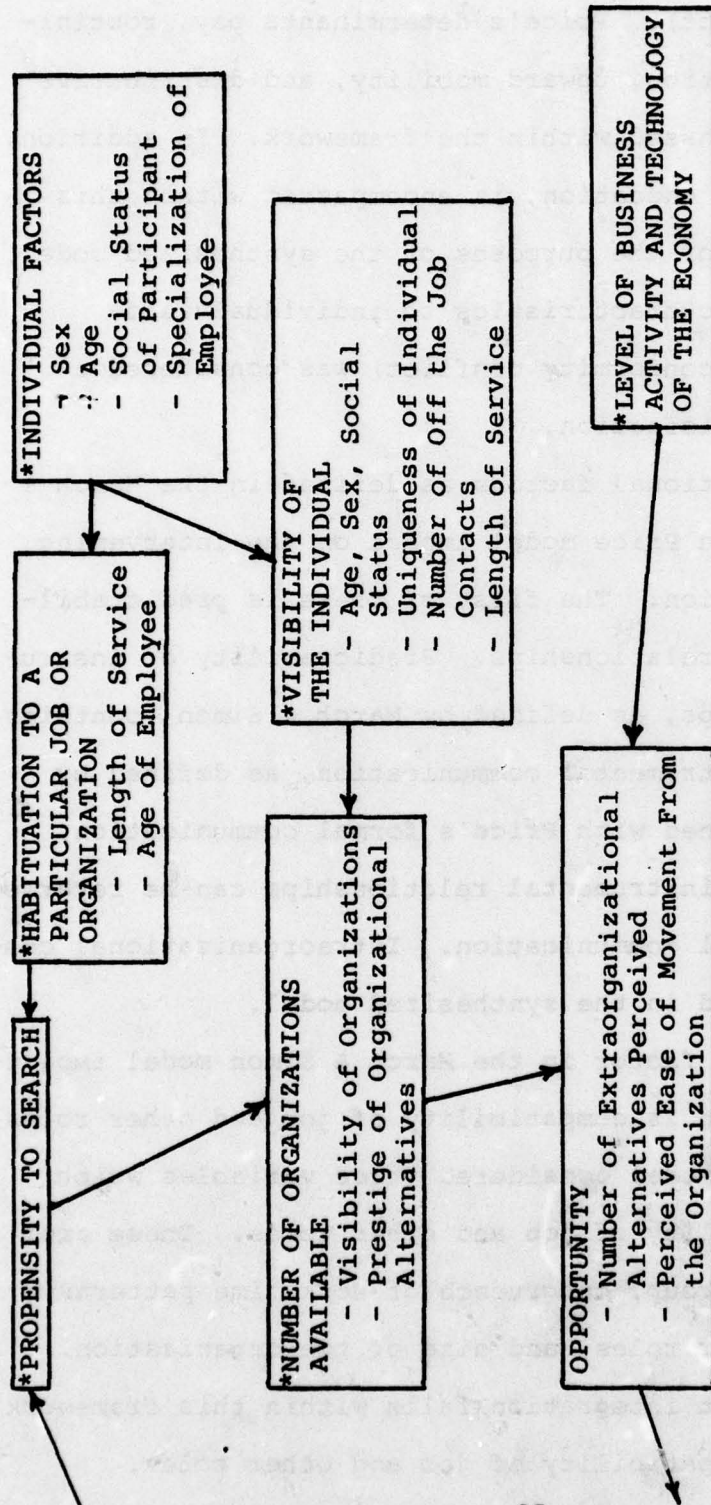
#### Variables Influencing Satisfaction

The March & Simon model deals with aggregates of variables acting together influencing the satisfaction of a participant with the job. As defined for the synthesized model, satisfaction is impacted by these same aggregates of variables. In the Price model, many of these variables are termed determinants, for example, pay, integration, and upward mobility. One is a correlate, education. The March & Simon model combined the variables pay, individual participation in the job assignment, level of employee education, rate of change in status and/or income, and consistency of supervisory practices with employee independence into a single variable called conformity of job characteristics to individual self-characterization



\*Variables unmeasurable by survey instrument.

Fig. 4. Synthesized Model



\*Variables unmeasurable by survey instrument.

Fig. 4--Continued



(conformity conflict). Price's determinants pay, routinization, centralization, upward mobility, and distributive justice are encompassed within the framework. In addition, Price's correlate, education, is encompassed within this same framework. For the purposes of the synthesized model, conformity of job characteristics to individual self-characterization (conformity conflict) was considered a determinant of satisfaction.

Three additional factors as defined in the March & Simon model and the Price model impact on the intervening variable satisfaction. The first of these is predictability of instrument relationships. Predictability of instrumental relationships, as defined by March & Simon, contains the concept of instrumental communication, as defined by Price. When combined with Price's formal communication, predictability of instrumental relationships can be retermed intraorganizational communication. Intraorganizational communication was used in the synthesized model.

The second factor in the March & Simon model impacting on satisfaction is compatibility of job and other roles. The March & Simon model considered three variables which comprise compatibility of job and other roles. These are: size of the work group; congruence of work time patterns with those of other roles, and size of the organization. Price's determinant integration falls within this framework as a factor of compatibility of job and other roles.

Compatibility of job and other roles was used as an aggregate factor and determinant of satisfaction in the synthesized model.

The third factor influencing satisfaction in the March & Simon model is the perceived possibility of intra-organizational transfer. The ease with which a participant can transfer within the organization is influenced by the size of the organization. Price did not address intra-organizational transfer possibilities in his model of turnover. Because the number of perceived intraorganizational transfer possibilities is higher in an organization of larger size, intuitively, a participant's satisfaction possibilities would be higher in that organization and the desirability of leaving would be lower.

#### Propensity to Search

The propensity to search is a trigger mechanism that operates whenever the satisfaction-dissatisfaction balance is tipped in favor of dissatisfaction. The level of dissatisfaction differs for each individual; however, it would be safe to say that at some level of dissatisfaction, an individual will cease scanning and enter the active search to relieve his satisfaction-dissatisfaction imbalance. In the March & Simon model, the propensity to search is the connection between satisfaction and variables

influencing opportunity. The propensity to search was used in the synthesized model.

#### Variables Influencing Opportunity

The variables influencing opportunity are numerous and most are interrelated with one another. Three sets of variables that were shown in Figure 3 are included in the synthesized model and influence perceived opportunity. The first set of variables were represented by the variable the number of organizations available. Habituation to a job or organization serves as a link to one of the variables, age, in the second set of variables to a variable propensity to search in the first set of variables. Habituation was included in the synthesized model. Length of service is a variable in the Price and March & Simon models. Because length of service influences both sets of variables and habituation, length of service was considered a variable and included in the synthesized model.

The second set of variables consists of personal factors and two economic factors. The personal factors are age, sex, social status, and specialization of the employee. Price treated age, specialization, and social status as correlates of turnover. March & Simon used these items as causal factors of turnover in their model. Since the synthesized model considered variables in the aggregate,



sex, social status, specialization, and age of the participant was included in the synthesized model as a personal factor.

The third set of variables influencing opportunity in the synthesized model are the levels of business activity and the technology of the economy. March & Simon specifically addressed these variables as factors which influence the perceived opportunity of a participant. Price, however, did not include these economic variables in his model. The level of business activity and the technology of the economy are considered an economic variable influencing opportunity in the synthesized model.

Figure 4 represents the synthesized model to be used in this study. This synthesized model represents the major concepts presented by Price and March & Simon and was applied to the turnover problem of enlisted aircraft maintenance personnel in the Air Force.

#### Career Intent as a Surrogate for Turnover

Two separate studies by the Naval Health Research Center have indicated that expressed career intent "... is an excellent predictor of actual reenlistment behavior [13:205]." One study was primarily interested in identifying determinants, while the other was interested in correlates. Whether expressed career intent is a correlate or determinant of reenlistment has little bearing on its

importance. Both studies indicated that expressed career intent is one of the most accurate predictors of reenlistment behavior (3:18).

The population involved in the first study was 1,270 first-term enlisted personnel aboard combat ships in the Atlantic and Pacific Fleets. These personnel were administered a 400-question survey. On the basis of one questionnaire item reflecting an individual's attitude toward reenlistment, a relationship was shown between expressed career intent and actual reenlistment. The responses available to these surveyed individuals on the questionnaire item ranged from "I definitely want to get out as soon as possible" to "I definitely plan to make, or have made, the Navy a career [13:205]." Ninety-four percent of those expressing little or no career intent in their responses actually did not reenlist, while 72 percent of those expressing career intent actually reenlisted (13:205-206).

The second study involved 1,572 enlisted sailors with less than two years until completion of their initial enlistment. Of these, data on actual reenlistment rates were available on 799 personnel. Of the respondents who had answered that they definitely intended to reenlist, 100 percent reenlisted. Of those responding they definitely would not reenlist, 97 percent actually did not reenlist. Similar correlation was found for the "probably reenlist"

and "probably not" reenlist, with percentage figures of 70 percent and 91 percent, respectively (3:19). On the basis of this information, the authors of this study stated that ". . . the single best predictor of reenlistment behavior was the individual's stated intentions regarding reenlistment [3:18]."

These two studies strongly support the contention that expressed career intent can be considered a surrogate for turnover. Assuming that enlisted sailors and enlisted maintenance personnel behave similarly, expressed career intent was used as a predictor of turnover of enlisted maintenance personnel.

#### Research Implications and Hypotheses

The preceding literature review identified the major factors which have been found to affect turnover decisions. The synthesized model indicates these major factors and the interrelationships.

The support found in the literature for expressed career intent as an accurate predictor of turnover was high enough that expressed career intent was used as a surrogate for turnover. Due to the limited scope of this research, expressed career intent was substituted for turnover in the application of the synthesized model to enlisted aircraft maintenance personnel with two to nine years of service.



The following hypotheses were used to test the synthesized model and should provide insight into the problem of enlisted aircraft maintenance personnel turnover rates to Air Force managers. The following hypotheses are concerned with relationship between the determinants of turnover and satisfaction (Objective 1).

Hypothesis 1--As conformity conflict decreases, the level of satisfaction increases.

Hypothesis 2--As intraorganizational communication increases, the level of satisfaction increases.

Hypothesis 3--As the compatibility of job and other roles increases, satisfaction increases.

The following hypotheses are concerned with the relationship between determinants of turnover and expressed career intent (Objective 2).

Hypothesis 4--As conformity conflict decreases, expressed career intent increases.

Hypothesis 5--As the intraorganizational communication increases, expressed career intent increases.

Hypothesis 6--As the compatibility of job and other roles increases, expressed career intent increases.

The following hypothesis is concerned with the relationship between satisfaction and expressed career intent (Objective 3).

Hypothesis 7--As satisfaction increases, expressed career intent increases.

The following hypothesis is concerned with the relationship between opportunity and expressed career intent (Objective 4).

Hypothesis 8--As perceived opportunity increases, expressed career intent decreases.

The following hypothesis is concerned with the relationship between satisfaction and opportunity (Objective 5).

Hypothesis 9--As satisfaction increases, perceived opportunity decreases.

## CHAPTER IV

### RESEARCH DESIGN AND METHODOLOGY

#### Introduction

This chapter presents the research design and methodology to be used for this study. The data gathering plan will be presented first, followed by the variable definitions and measurement plans. The chapter concludes with the data analysis plan.

#### Data Gathering Plan

##### Data Collection Instrument

The data collection instrument used in this study was the 1977 United States Air Force Quality of Air Force Life Active Duty Air Force Personnel Survey (hereafter referred to as the 1977 AFQOL survey). The text of this survey is reproduced in Appendix A. The 1977 survey was an updated version of the Air Force Management Improvement Group (AFMIG) survey conducted in 1975. Sixteen thousand questionnaires were distributed to a random sample of Air Force personnel and 10,689 questionnaires were returned (1:46).

The 1975 and 1977 AFMIG surveys have been extensively used to evaluate the quality of Air Force life. The questionnaire consisted of 165 questions; the first



19 collected demographic information while the remaining 146 questions measured attitudes toward various aspects of Air Force life. It was assumed that the instrument was valid and reliable since previous studies have obtained valid analytical results (1; 16).

#### Description of the Population

The target population for this study consisted of male Air Force enlisted maintenance personnel with two to nine years of active duty and possessing AFSCs of the 32XXX, 42XXX, and 43XXX career fields. In addition to excluding female enlisted personnel, enlisted personnel in non-maintenance fields not involved in aircraft maintenance were excluded because it was assumed that these enlisted personnel might have different opinions about the quality of Air Force life due to differing value systems or the uniqueness of their training or expertise.

#### Description of the Sample

The sample consisted of 234 male enlisted aircraft maintenance personnel with two to nine years of active duty who responded to the 1977 AFQOL survey. A data-producing sample of 229 respondents was obtained by eliminating all respondents who failed to answer the questions required for this study. Of the 229 respondents, 74 were from the 32XXX (Avionic Systems) career field; 61 were from the 42XXX (Aircraft Systems Maintenance) career field; and, 94 were

from the 43XXX (Aircraft Maintenance) career field.

One hundred fifty-one of the respondents were married; the remaining 78 were either single, divorced, separated, or widowers. Of the respondents, 98.3 percent (n=225) had a high school diploma or better. The majority of the respondents (n=118) normally worked a day shift; 38 worked swing shift; 21 worked the graveyard shift; and, 52 rotated shifts. With regard to race, 172 of the respondents were white; 21 were black; and the remaining 36 respondents were of "other" ethnic backgrounds.

#### Inferences About the Population

Inferences about the population can only be made for the Air Force population represented by the sample. That is, inferences can only be made about the Air Force population of male enlisted aircraft maintenance personnel with two to nine years of active duty and possessing AFSCs of 32XXX, 42XXX, and 43XXX career fields.

#### Variable Definition and Measurement

##### Expressed Career Intent

Expressed career intent is the dependent variable of the synthesized model presented in Figure 4, Chapter III. Career intent, as a surrogate for turnover, was defined as the stated intention of a respondent toward making the Air Force a career. Each respondent's expressed career intent was measured by survey question 14, which read:

Which one of the following best describes your attitude toward making the Air Force a career?

A five-point Likert scale was used for the responses, ranging from 1 (definitely intend to make the Air Force a career) to 5 (definitely do not intend to make the Air Force a career). Past studies (1; 3; 13) have shown that the career intent question is a reliable and accurate predictor of turnover.

### Satisfaction

Satisfaction as defined for this study encompasses satisfaction with the job, satisfaction with the organization, and satisfaction with the individual's environment. Satisfaction was measured by the Hoppock Job Satisfaction Measure.

A set of four questions relating to an individual's perception of satisfaction, as defined above, was used for the Hoppock Measure. Each question was given equal weight and a satisfaction score was obtained by summing the responses to the following four questions (questions 57, 58, 59, and 60):

Which one of the following shows how much of the time you feel satisfied with your job?

Choose the one of the following statements which best tells how well you like your job.

Which one of the following best tells how you feel about changing your job?

Which one of the following shows how you think you compare with other people?



The responses of these four questions are arrayed on a seven-point Likert scale with values ranging from one to seven and, therefore, the sum of the responses ranged from four to twenty-eight. The sequence of responses for questions 57 and 60 was reversed and a correction was made prior to summation (16:737). The Hoppock Job Satisfaction Measure has been used widely and has proven to be a valid and reliable job satisfaction measure. McNichols, et al., conducted a study of four data bases involving over 29,000 responses total from populations including managers in a large public utility company, Department of Defense civil service employees in all grades and a wide variety of occupational specialties, military personnel in all grades through colonel and in a variety of occupational categories, and military personnel in a strategic missile wing. The results of the McNichols, et al., study indicated that the Hoppock Job Satisfaction Measure provided a meaningful measure of job satisfaction in terms of reliability, construct validity, and face validity. In addition, the Hoppock Job Satisfaction Measure performed consistently over a wide variety of sample populations of divergent job categories, demographic groupings, and occupational levels (16:737-742).

### Opportunity

The intervening variable opportunity represents the factors external to the organization which contribute to an individual's turnover decision. For this study, opportunity was defined as the alternative job opportunities perceived in the environment and the perceived ease of movement from the organization. Operationally defined, opportunity is the individual's perception of the availability of alternative jobs in private industry with pay, benefits, duties, and responsibilities comparable with those of the individual's present job and the ease with which the individual can leave the organization. Opportunity was measured by responses to the following statement (question 30):

If I left the Air Force tomorrow, I think it would be very difficult to get a job in private industry with pay, benefits, duties, and responsibility comparable with those of my present job.

Responses to question 30 were measured on a five-point Likert scale and were given values from 1 (strongly agree) to 5 (strongly disagree).

Only one previous study was located that used question 30 alone and determined the question to be valid and reliable (1:83-89). In addition, the question asked specifically whether the individual agrees or disagrees with the statement that comparable employment would be very difficult to find in private industry at the present time. Therefore, it was felt that the question was a valid measure

of an individual's perception of opportunity for alternate employment outside the Air Force. The reliability of this question and all further questions described in this study from this point on, unless indicated otherwise, can only be determined by techniques outside the scope of this study. It seems reasonable to assume that simple, direct questions will produce reliable data. Furthermore, all the questions used to measure the variables that follow are of a simple and direct nature and the researchers assumed that the data generated were valid and reliable for this study.

#### Conformity Conflict

Conformity conflict is used as one of the determinants of satisfaction. Conformity conflict is defined as an individual's self-characterization as compared to the characteristics inherent in the job. That is, how well does the characteristics of the job conform to the individual's self-image or ego-ideal. The determinant conformity conflict is an aggregate of the following determinants of turnover previously defined in Chapter II:

1. Pay
2. Level of education
3. Promotion
4. Individual participation in job assignment
5. Consistency of supervisory practices with employee independence



The following four questions measured the individual's perceived satisfaction with training and participation in decision making (questions 69, 124, 125, 135):

My present job makes good use of my training and ability.

When decisions are being made in my organization, the persons who will be affected most are asked for their ideas.

Persons who do not supervise others in my organization have an adequate amount of say or influence on what goes on.

Are you given the freedom you need to do your job well?

The responses to questions 69, 124, and 125 were arrayed on a five-point Likert scale and were given values from 1 (strongly disagree) to 5 (strongly agree). The responses to question 135 were arrayed on a Likert five-point scale and were given values from 1 (never) to 5 (always).

The following seven questions measured an individual's perceived satisfaction with economic standard, economic security, leadership/supervision, equity, promotion, personal growth, and health (questions 21, 23, 88, 137, 139, 144 and 160):

To what degree are you satisfied with the ECONOMIC STANDARD aspects of your life?

To what degree are you satisfied with the ECONOMIC SECURITY aspects of your life?

To what degree are you satisfied with the LEADERSHIP/SUPERVISION aspects of your life?

To what degree are you satisfied with the EQUITY aspects of your life?

The Air Force promotion system is effective (i.e., the best qualified people are generally selected for promotion).

To what degree are you satisfied with the PERSONAL GROWTH aspects of your life?

To what degree are you satisfied with the HEALTH aspects of your life?

The above questions, with the exception of the promotion question, defined the capitalized word prior to asking the questions. By defining the variable prior to asking the question, the chances of a respondent reading more into the question than is asked for is reduced. These questions were well-defined and direct and should produce valid data for the measurement of the defined variable. Responses to questions 21, 23, 88, 137, 144, and 160 were arrayed on a seven-point Likert scale and were given values from 1 (highly dissatisfied) to 7 (highly satisfied). The promotion question, 139, was arrayed on a Likert seven-point scale and was given values from 1 (strongly disagree) to 7 (strongly agree).

A value was then computed for conformity conflict by adding the seven-point Likert scale questions to the five-point Likert scale question which was converted to a seven-point scale, and then dividing by 11 (the number of questions summed).

### Intraorganizational Communication

Intraorganizational communication is defined as both formal and informal communication within an organization. Operationally defined, intraorganizational communication is communication received from a supervisor on how to accomplish a task as well as communication from top levels of the organization to the organization as a whole. Intraorganizational communication was measured by responses to the following questions (questions 117, 120, 126, 127, 130, 131, and 132):

The Air Force does a good job of keeping me informed about what is going on.

My supervisor tries to get my ideas before making decisions that are important to me.

Information is usually widely shared in my organization so that those who make the decisions will base their decisions on the best available know-how.

I get the information I need to do my job in the best possible way.

My supervisor pays attention to what I have to say.

How often do you and your supervisor get together to set your personal performance objectives?

How often are you given feedback from your supervisor about your job performance?

Responses to the above questions were arrayed on a five-point Likert scale and were given values from 1 (strongly disagree) to 5 (strongly agree). Questions 131 and 132 were given values from 1 (never) to 5 (very frequently). The seven questions were summed and divided by 7 to provide



an intraorganizational communication value with each question having equal weight.

#### Compatibility of Job and Other Roles

Compatibility of the job and other roles was defined as how well the roles required on the job and the other roles an individual was required to fill (husband, father) fit together. Compatibility was also a function of the opportunity an individual has to participate in cohesive and rewarding groups both on and off the duty. Compatibility of job and other roles was measured by responses to the following questions (questions 52, 119, 121, and 128):

To what degree are you satisfied with the FREE TIME aspects of your life?

Persons in my work group encourage each other to work as a team.

Persons in my work group offer each other new ideas for solving job-related problems.

When I talk to people in my work group, they pay attention to what I am saying.

The responses to question 52 were arrayed on a Likert seven-point scale and were given values from 1 (highly dissatisfied) to 7 (highly satisfied). The responses to questions 119, 121, and 128 were arrayed on a five-point Likert scale and each response was given a value from 1 (strongly disagree) to 5 (strongly agree). A compatibility value was computed by multiplying each response value for the five-point-scaled questions by 1.4, to convert the value to a

seven-point scale, then summed with the value for question 42, and the total divided by four to arrive at a compatibility of job and other roles value

#### Unmeasureable Variables

Seven of the variables in the synthesized model of turnover (Figure 4) were not measureable using the 1977 AFQOL survey. Although these variables could not be measured, they remain in the synthesized model to keep the model complete. The seven unmeasureable variables are:

1. Perceived ease of intreorganizational transfer
2. Propensity to search
3. Number of organizations available
4. Level of business activity and technology

of the economy

5. Habituation to a particular job or organization
6. Individual factors
7. Visibility of the individual

#### Data Analysis

##### Statistical Method

The synthesized model (Figure 4) in Chapter III was the basis for the research hypotheses of this research and indicated directional relationships between the determinants, intervening variables, and expressed career intent. When directional independent-dependent relationships are indicated, regression analysis is an appropriate statistical

technique. Regression analysis measures the linear relationship between independent and dependent variables. Regression analysis is more efficient and powerful than nonparametric statistical methods (27:19).

Path analysis provides another method of further analyzing directional linear relationships. Path analysis is a method of decomposing and interpreting linear relationships and may be used to draw causal inferences among a set of variables (9:111; 10:327).

Regression analysis and path analysis were used in this research to assess the direction and strength of the relationships previously defined and to assess the presumed causal order of the variables. Both were accomplished using the Statistical Package for the Social Sciences (SPSS), subprogram REGRESSION (20:320-367; 20:383-397). A description of each statistical technique follows.

Simple Linear Regression Analysis. Regression analysis was used to measure the direction and strength of the hypothesized relationships stated in Chapter III.

$\beta$ , the Regression Coefficient.  $\beta$ , the regression coefficient of the independent variable, is of primary concern in testing the statistical significance of the relationships among the variables evidenced by the regression results. The statistical significance of  $\beta$ , and therefore of the regression analysis, was tested using the F statistic



at the .05 level of significance. The sign of the  $\beta$  coefficient indicates the direction of the relationship between regression variables. That is, if the sign of  $\beta$  is positive, a direct relationship between the dependent and independent variables is indicated. If the sign of  $\beta$  is negative, an inverse relationship is indicated (19:32-33,215-217).

$R^2$ , the Coefficient of Determination. If the variable relationships of the regression analysis were shown to be statistically significant, the coefficient of determination,  $R^2$ , was used to test the importance of the relationship between the dependent and independent variables identified in the research hypotheses. The  $R^2$  value may be interpreted ". . . as the proportionate reduction of total variation associated with the use of the independent variable, X [19:89]." That is, the  $R^2$  value is that portion of the variation in the dependent variable Y, explained by the independent variable X.

$R^2$  can take on values from zero to one. When  $R^2=1$ , the independent variable X has accounted for all the variation in the dependent variable Y. If  $R^2=0$ , then the independent variable X has explained none of the variation in the dependent variable Y.  $R^2$  is rarely found to be zero or one; rather, it is found to be somewhere between these two extremes. The closer  $R^2$  is to one, the greater the degree of association between X and Y. Past research on

job satisfaction has indicated the  $R^2$  values of 0.10 or above can be considered of practical importance (4; 6; 22; 23). Therefore, the research hypotheses were considered supported by the data if the  $R^2$  value was 0.10 or greater.

Multiple Linear Regression. The research hypotheses postulated that job satisfaction (or expressed career intent) was dependent upon several independent variables. Often the independent variables do not have completely independent effects on the dependent variable. The result of this lack of independent effects, or multicollinearity, is that the variation explained by the multiple effects of all the independent variables is less than the sum of the variations explained by each independent variable separately. To detect multicollinearity, multiple linear regression was used. The Hoppock Job Satisfaction Measure and expressed career intent were each used as the dependent variable in separate regression analyses. The independent variables used in each analysis were the testable determinants: conformity conflict, intraorganizational communication, and compatibility of job and other roles.

Path Analysis. Path analysis is a method of decomposing and interpreting linear relationships among a set of variables by assuming that a weak causal order among the variables is known or can be reasonably assumed, and that the

relationships among the variables are causally closed (20:383).<sup>1</sup>

The assumption of weak causal order postulates that, given a pair of variables,  $X_1$  and  $X_2$ , a weak causal order is established, such that  $X_2$  causes  $X_1$  if it is assumed or known that  $X_2$  may affect  $X_1$ , but  $X_1$  cannot affect  $X_2$ . This does not necessarily required  $X_2$  to be a cause of  $X_1$  (20:384-385).

Causal closure assumes that, given a bivariate covariation between  $X_2$  and  $X_1$  and a known weak causal ordering,  $X_2$  causes  $X_1$ , the observed covariation between  $X_1$  and  $X_2$  may be due (1) solely to the causal dependence of  $X_1$  on  $X_2$ , (2) to their mutual dependence on an outside variable (or variables), or (3) to the combination of the previous two (20:385).

The basic assumptions of linear regression regarding the error terms are also operative in path analysis. That is, the error terms are independently and normally distributed; they have an expected value equal to zero; and a constant variance (homoscedasticity) (19:47). However,

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<sup>1</sup>A detailed discussion of path analysis is beyond the scope of this study. It is assumed the reader is conversant with the theory of regression analysis; this study will concentrate only on the application of regression analysis to proposed causal paths. An excellent introductory summary of the concepts of path analysis can be found in Statistical Package for the Social Sciences, 2d ed., Norman H. Nie, et al., McGraw-Hill Book Co., New York, 1975, and a more detailed presentation in Causal Analysis, David R. Heise, John Wiley & Sons, Inc., New York, 1975.



path analysis is primarily a technique for working out the logical consequences of the first two assumptions.

The identification of causal structures does not prove the existence of causal relationships; however, it does provide a basis for drawing inferences. "As a pattern of interpretation . . . path analysis is invaluable in making explicit the rationale for a set of regression calculations [5:7]."

Path analysis uses both path diagrams and systems of linear regression equations to represent the system of relationships among a set of variables (10:329), as in Figure 4, Chapter III. In path diagrams, assumptions about the causal order or direction of relationships between independent and dependent variables are made explicit by the direction of the arrows between variables. The paths between variables are labeled with path coefficients (similar to regression coefficients) (21:62). According to Duncan, the order of the subscripts of these coefficients is significant: the first subscript represents the dependent variable and the second subscript represents the variable whose direct effect on the dependent variable is measured by the path coefficient (5:4).

In general, given  $n$  variables with an assumed weak causal order such that  $X_n \leq \dots \leq X_2 \leq X_1$  (where  $\leq$  means "is caused by"), estimation of all path coefficients will require  $(n-1)$  regression solutions, taking each of the  $(n-1)$

lower order variables, in succession, as the dependent variable and using all of its higher-order variables as predictors (20:386). Also, ". . . although path coefficients can be represented by either the ordinary regression coefficient or standardized betas, it is customary to use the beta values [20:387]."

A four-step procedure was used in the path analysis. First, the derived variables were examined to ensure that they met the requirements of regression analysis. Each of the variables indicated a central tendency and the sample was large enough to invoke the central limit theorem.

Second, the path coefficients were calculated from the residual variables in order to assess the relevant subsystems. Since path coefficients are the beta coefficients of a regression equation, the usual system for a regression setup was used. The estimation of the path coefficient required a series of ordinary least-squares regressions using one variable at a time as the dependent variable and all the higher causal order variables as the independent variables (20:392). If there is an indication of a given path being null, ordinary F-tests for individual regression coefficients were used to examine this possibility (20:393).

The third step identified the effects of prior causal variables by calculating the effect coefficients. The effect coefficient is the sum of the direct effect of

the independent variable on the dependent variable plus any indirect effect of the intervening variable.

The fourth and final step was to construct a decomposition table for the total variation between pairs of variables.

#### Hypothesis Testing

In this section, each of the research objectives and their associated hypotheses are reviewed, the independent and dependent variables are identified, and the statistical hypotheses are introduced. Each of the null statistical hypotheses was tested at the 0.05 level of significance. If the null hypothesis could not be rejected, it was concluded that insufficient evidence was available to support the hypothesis in question. If the null hypothesis was rejected and if the associated  $R^2$  value was 0.10 or greater, it was concluded the research hypothesis was supported by the data.

Objective 1, Hypotheses 1 through 3. Objective 1 and hypotheses 1 through 3 are concerned with the nature and strength of the relationships between the determinants of turnover and satisfaction. For these hypotheses, the determinant is the independent variable and job satisfaction is the dependent variable.



Hypothesis 1: The null statistical hypothesis ( $H_0$ ) of hypothesis 1 is that conformity conflict is directly related to satisfaction. That is:

$$H_0: \beta = 0$$

$$H_A: \beta \neq 0$$

where  $\beta$  is the regression coefficient.

Hypothesis 2: The null statistical hypothesis ( $H_0$ ) of hypothesis 2 is that intraorganizational communication is not directly related to satisfaction. That is:

$$H_0: \beta = 0$$

$$H_A: \beta \neq 0$$

where  $\beta$  is the regression coefficient.

Hypothesis 3: The null statistical hypothesis ( $H_0$ ) for hypothesis 3 is that compatibility of job and other roles is not directly related to satisfaction. That is:

$$H_0: \beta = 0$$

$$H_A: \beta \neq 0$$

where  $\beta$  is the regression coefficient.

Objective 2, Hypotheses 4 through 6. Objective 2 and hypotheses 4 through 6 are concerned with the nature and strength of the relationship between the determinants of turnover and expressed career intent. For these hypotheses,

the independent variable is the determinant and the dependent variable is expressed career intent.

Hypothesis 4: The null statistical hypothesis ( $H_0$ ) for hypothesis 4 is that conformity conflict is directly related to career intent. That is:

$$H_0: \beta = 0$$

$$H_A: \beta \neq 0$$

where  $\beta$  is the regression coefficient.

Hypothesis 5: The null statistical hypothesis ( $H_0$ ) of hypothesis 5 is that intraorganizational communication is not directly related to expressed career intent. That is:

$$H_0: \beta = 0$$

$$H_A: \beta \neq 0$$

where  $\beta$  is the regression coefficient.

Hypothesis 6: The null statistical hypothesis ( $H_0$ ) for hypothesis 6 is that compatibility of job and other roles is not directly related to expressed career intent. That is:

$$H_0: \beta = 0$$

$$H_A: \beta \neq 0$$

where  $\beta$  is the regression coefficient.

Objective 3 and Hypothesis 7. Objective 3 and hypothesis 7 are concerned with the nature and strength of the relationship between satisfaction and expressed career intent. For this hypothesis, satisfaction is the independent variable and expressed career intent is the dependent variable.

Hypothesis 7: The null statistical hypothesis ( $H_0$ ) for hypothesis 7 is that satisfaction is not directly related to expressed intent. That is:

$$H_0: \beta = 0$$

$$H_A: \beta \neq 0$$

where  $\beta$  is the regression coefficient.

Objective 4 and Hypothesis 8. Objective 4 and hypothesis 8 are concerned with the nature and strength of the relationship between opportunity and expressed intent. For this hypothesis, the independent variable is opportunity and the dependent variable is expressed career intent.

Hypothesis 8: The null statistical hypothesis ( $H_0$ ) for hypothesis 8 is that opportunity is directly related to expressed career intent. That is:

$$H_0: \beta = 0$$

$$H_A: \beta \neq 0$$

where  $\beta$  is the regression coefficient.



Objective 5 and Hypothesis 9. Objective 5 and hypothesis 9 are concerned with the nature and strength of the relationship between satisfaction and perceived opportunity. For this hypothesis, satisfaction is the independent variable and opportunity is the dependent variable.

Hypothesis 9: The null statistical hypothesis ( $H_0$ ) for hypothesis 9 is that satisfaction is directly related to perceived opportunity. That is:

$$H_0: \beta$$

$$H_A: \beta$$

where  $\beta$  is the regression coefficient.

#### Assumptions

The following assumptions were made based on the literature review, survey data, and statistical method employed for the analysis.

1. The data-producing instrument is valid and reliable.
2. The questions used for variable measurement are valid and reliable.
3. The use of parametric statistical methods on certain ordinal level data is an acceptable analytical procedure (7:52-56).
4. The variables being tested were normally distributed.

5. The respondents answered the questions honestly and their responses reflect their true opinions.

#### Summary

This chapter has presented the research design and methodology used in this study. The data gathering plan was presented and discussed the data collection instrument and described the target population and sample. Next, the variables used in this study and the specific questions used in variable measurement were defined. The data analysis plan was then presented which included a discussion of simple and multiple regression analysis and path analysis. Finally, the hypotheses to be tested and the assumptions of this study were presented. The next chapter will present the results of the data analysis.

## CHAPTER V

### RESULTS AND ANALYSES

#### Introduction

The synthesized model of turnover developed in Chapter III defined the relationships between the determinants of turnover, satisfaction, opportunity, and expressed career intent. This chapter presents the results of the data analysis in terms of the research objectives in Chapter I and the postulated hypotheses in Chapter III.

First, simple linear regression results pertinent to the research objectives are presented with a brief explanation. Each research objective is restated, then the regression results pertinent to the objectives are presented with a brief explanation. Second, the multiple regression results are presented with satisfaction and then expressed career intent as the dependent variable. Third, multicollinearity was assessed when the results of the simple and multiple regression results are compared. Fourth, the results of the bivariate correlations are presented. Fifth, the path analysis results are presented to reflect the presumed causal ordering of the determinants, intervening variables, and expressed career intent. Finally, the results of the comparison of the variables of



the synthesized model and the demographic variables are presented.

### Simple Linear Regression

Simple linear regression was used to measure the direction and strength of the variables in each of the hypotheses.

### Determinants of Turnover → Satisfaction Objective

The first objective was to determine the relationship between the determinants of turnover and satisfaction. Hypotheses 1 through 3 were formulated to obtain the first objective. Each hypothesis was evaluated using simple linear regression.

Regression Results. The results of the regression analyses are summarized in Table 1. In the following paragraphs, each hypothesis pertinent to the first objective is restated and the data analysis explained.

Hypothesis Testing. The first hypothesis--as conformity conflict decreases, the level of satisfaction increases--was supported by the data. The relationship between conformity conflict and satisfaction was statistically significant and the  $R^2$  value (.30711) surpassed the criterion of 0.10, as stated in Chapter IV. The negative regression

TABLE 1

REGRESSION RESULTS WITH SATISFACTION AS  
THE DEPENDENT VARIABLE

Determinant	$\beta^*$	$R^2$
Conformity Conflict	-2.70567	.30711
Compatibility of job and Other Roles	1.70022	.14530
Intraorganizational Communication	2.29359	.13745

\* $p \leq .05$ .

coefficient ( $\beta = -2.70567$ ) supported the hypothesized indirect relationship.

The second hypothesis--as intraorganizational communication increases, the level of satisfaction increases--was supported by the data. The relationship between intraorganizational communication and satisfaction was statistically significant and the  $R^2$  value (.13745) surpassed the criterion of 0.10. The positive regression coefficient ( $\beta = 2.9359$ ) supported the hypothesized direct relationship.

The third hypothesis--as the compatibility of job and other roles increases, satisfaction increases--was supported by the data. The relationship between the compatibility of job and other roles and satisfaction was statistically significant and the  $R^2$  value (.14530) surpassed the criterion of 0.10. The positive regression coefficient ( $\beta = 1.70022$ ) supported the hypothesized direct relationship.

Determinants of Turnover + Expressed  
Career Intent Objectives

The second objective was to determine the relationship between the determinants of turnover and expressed career intent. Hypotheses 4 through 6 below were formulated to obtain the second objective.

Regression Results. The results of the regression analysis are summarized in Table 2.

TABLE 2  
REGRESSION RESULTS WITH EXPRESSED CAREER INTENT  
AS THE DEPENDENT VARIABLE

Determinant	$\beta^*$	$R^2$
Conformity Conflict	-.52231	.13523
Compatibility of Job and Other Roles	.30720	.05605
Intraorganizational Communication	.35299	.03847

\* $p \leq .05$ .

Hypothesis Testing. The fourth hypothesis--as conformity conflict decreases, expressed career intent increases--was supported by the data. The relationship between conformity conflict and expressed career intent was statistically significant and the  $R^2$  value (.13523) surpassed the criterion of 0.10. The negative regression coefficient ( $\beta = -.52251$ ) supported the hypothesized indirect relationship.



The fifth hypothesis--as intraorganizational communication increases, expressed career intent increases--was not supported by the data. Although the relationship between intraorganizational communication and expressed career intent was statistically significant, the  $R^2$  value fell below the established criterion of 0.10 ( $R^2 = .03817$ ). Thus, while the association between intraorganizational communication and expressed career intent was greater than a chance occurrence, the relationship was not strong enough to support the hypothesis.

The sixth hypothesis--as the compatibility of the job and other roles increases, expressed career intent increases--was not supported by the data. The relationship between compatibility of job and other roles and expressed career intent was statistically significant; however, the  $R^2$  value fell below the established criterion of 0.10 ( $R^2 = .05605$ ). The association was greater than a chance occurrence, but the relationship was not strong enough to support the hypothesis.

Satisfaction → Expressed Career  
Intent Objective

The third objective was to determine the relationship between satisfaction and expressed career intent. Hypothesis 7 was formulated to test this objective. The hypothesis was evaluated using simple linear regression.

Regression Results. The seventh hypothesis--as satisfaction increases, expressed career intent increases--was supported by the data. The relationship between satisfaction and expressed career intent was statistically significant and the  $R^2$  value (.29261) surpassed the criterion of 0.10. The positive regression coefficient ( $\beta = .15736$ ) supported the hypothesized direct relationship.

Perceived Opportunity + Expressed  
Career Intent Objective

The fourth objective was to determine the relationship between perceived opportunity and expressed career intent. Hypothesis 8 was formulated to test this objective. The hypothesis was evaluated using simple linear regression.

Regression Results. The eighth hypothesis--as perceived opportunity increases, expressed career intent decreases--was supported by the data. The relationship between perceived opportunity and expressed career intent was statistically significant and the  $R^2$  value (.11831) surpassed the criterion of 0.10. The negative regression coefficient ( $\beta = -.38826$ ) supported the hypothesized indirect relationship.

Satisfaction + Perceived  
Opportunity Objective

The fifth and last objective was to determine the relationship between satisfaction and perceived opportunity.

Hypothesis 9 was formulated to test this objective. The hypothesis was evaluated using simple linear regression.

Regression Results. The ninth hypothesis--as satisfaction increases, perceived opportunity decreases--was not supported by the data. The relationship between satisfaction and perceived opportunity was statistically significant; however, the  $R^2$  value was below the established criterion of 0.10 ( $R^2 = .02810$ ). The association was greater than a chance occurrence, but the relationship was not strong enough to support the hypothesis.

#### Summary of Simple Linear Regression Results

The results of the simple linear regression analysis supports the relationships of the hypotheses postulated in Chapter IV. However, the computed  $R^2$  values of hypotheses 5, 6, and 9 did not attain the established criterion of 0.10. The associations were greater than chance occurrences, but the relationships were not powerful enough to support the stated hypotheses.

#### Multiple Linear Regression

Table 3 presents the results of the multiple linear regression with satisfaction as the dependent variable. Conformity conflict was the most powerful independent variable and intraorganizational communication was the weakest



TABLE 3  
MULTIPLE LINEAR REGRESSION WITH SATISFACTION  
AS THE DEPENDENT VARIABLE

Determinants with Satisfaction as the Dependent Variable		
Determinants	$R^2$	$\Delta R^2$
Conformity Conflict	.30711	.30711
Compatibility of Job and Other Roles	.32146	.01435
Intraorganizational Communication	.32189	.00043

variable. The relative strength of each variable was consistent with the simple linear regression results presented in Table 1. Table 4 presents the results with expressed career intent as the dependent variable. Likewise, the relative strength of conformity conflict is consistent with the results presented in Tables 1, 2, and 3.

#### Multicollinearity

As stated in Chapter IV, multiple linear regression (MLR) was used to evaluate the possibility of multicollinearity. A priori, multicollinearity between the independent variables used was expected since intraorganizational communication and compatibility of job and other roles should have an inverse relationship with conformity conflict. Multicollinearity is indicated when the MLR

TABLE 4

MULTIPLE LINEAR REGRESSION WITH EXPRESSED  
CAREER INTENT AS THE DEPENDENT VARIABLE

Determinants with Expressed Career Intent as the Dependent Variable		
Determinants	$R^2$	$\Delta R^2$
Conformity Conflict	.13523	.13523
Compatibility of Job and Other Roles	.13893	.00369
Intraorganizational Communication	.14477	.00584

results in Table 3, with satisfaction as the dependent variable, is compared with the simple linear regression (SLR) results in Table 1. The total variation explained by the MLR ( $R^2 = .32189$ ), with the three independent variables, was less than the variation explained by the SLR ( $\Sigma R^2 = .58986$ ).

Also, multicollinearity is indicated when the MLR results in Table 4 are compared with the SLR results in Table 2 with expressed career intent as the dependent variable. The total variation explained by the MLR ( $R^2 = .14477$ ) was less than the variation explained by the SLR ( $\Sigma R^2 = .22975$ ) with the same three testable independent variables.

### Bivariate Correlation Results

The Pearson Product-Moment correlations between the variables of the synthesized model are shown in Table 5. The correlations of the variables are statistically significant ( $p \leq .01$ ).

The bivariate correlations between the variables of the synthesized model support the research objective and the postulated hypotheses presented in Chapter III. Also, these correlations indicate multicollinearity as shown in the multiple linear regression results presented in Table 3 and Table 4.

### Path Analysis Results

The presumed causal order of the variables of the synthesized model, as presented in Figure 5, were tested using Path Analysis. Figure 6 assessed the relative impact of the independent variables on the dependent variable, career intent, with satisfaction as the intervening (presumed) variable. In contrast, Figure 7 assessed the relative impact of the independent variables on the dependent variable, career intent, with opportunity as the presumed intervening variable.

The various path coefficients for the presumed model tested are the coefficients of the diagrams (Figures 6 and 7). The effect coefficients are presented in Table 6 with satisfaction as the presumed intervening variable.



TABLE 5  
BIVARIATE CORRELATIONS OF VARIABLES  
(n=229)

Variables	1	2	3	4	5	6
1. Expressed Career Intent						
2. Satisfaction	.54**					
3. Opportunity	-.34**	-.17*				
4. Conformity Conflict	-.37**	-.55**	.31**			
5. Compatibility of Job and Other Roles	.24**	.38**	-.25**	-.50**		
6. Intraorganizational Communication	.20*	.37**	-.19*	-.65**	.52**	-

\*p ≤ .01.

\*\*p ≤ .001.

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TURNOVER OF AIR FORCE FNLISTED AIRCRAFT MAINTENANCE PERSONNEL. (U)  
JUN 79 J W PUTT, S K WILLIAMS

AD-A073 016 AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OH SCHOOL--ETC F/G 5/9  
TURNOVER OF AIR FORCE FNLISTED AIRCRAFT MAINTENANCE PERSONNEL. (U)  
JUN 79 J W PUTT, S K WILLIAMS

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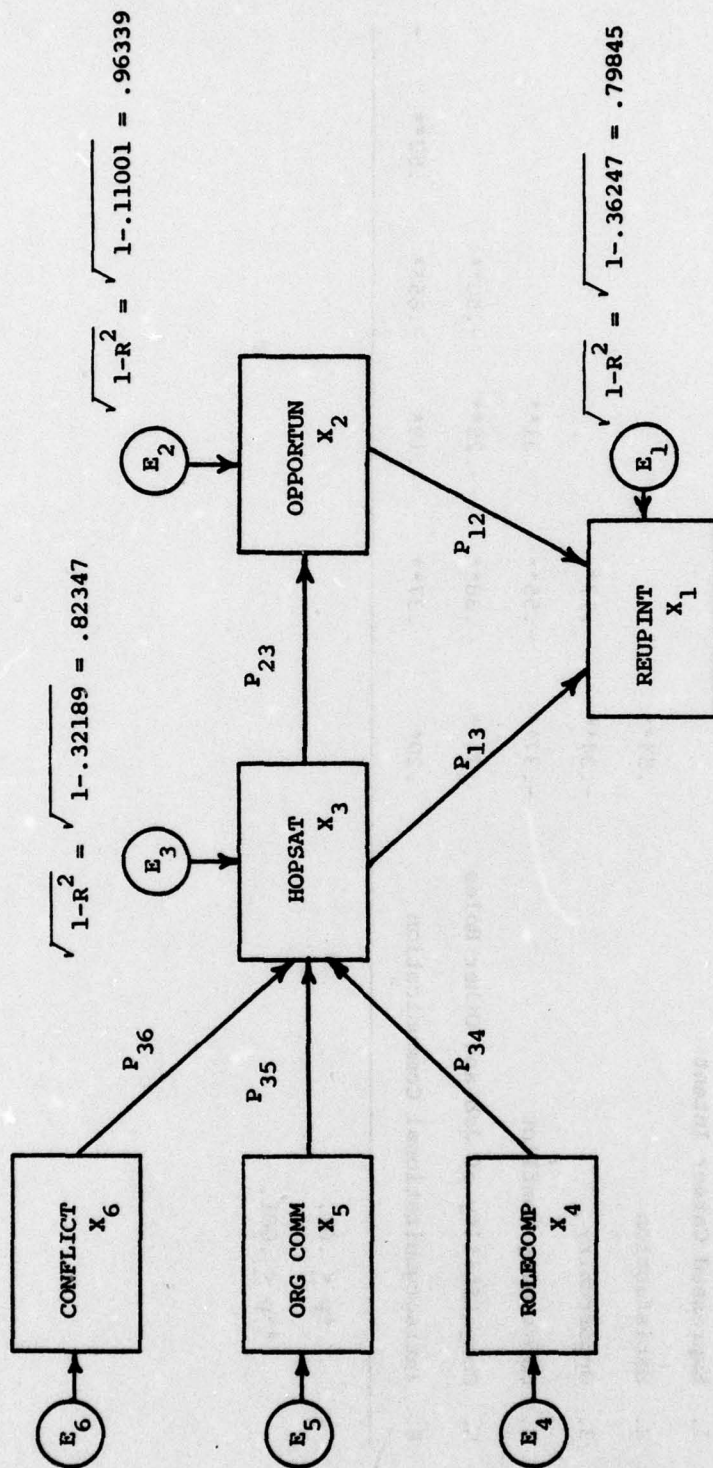
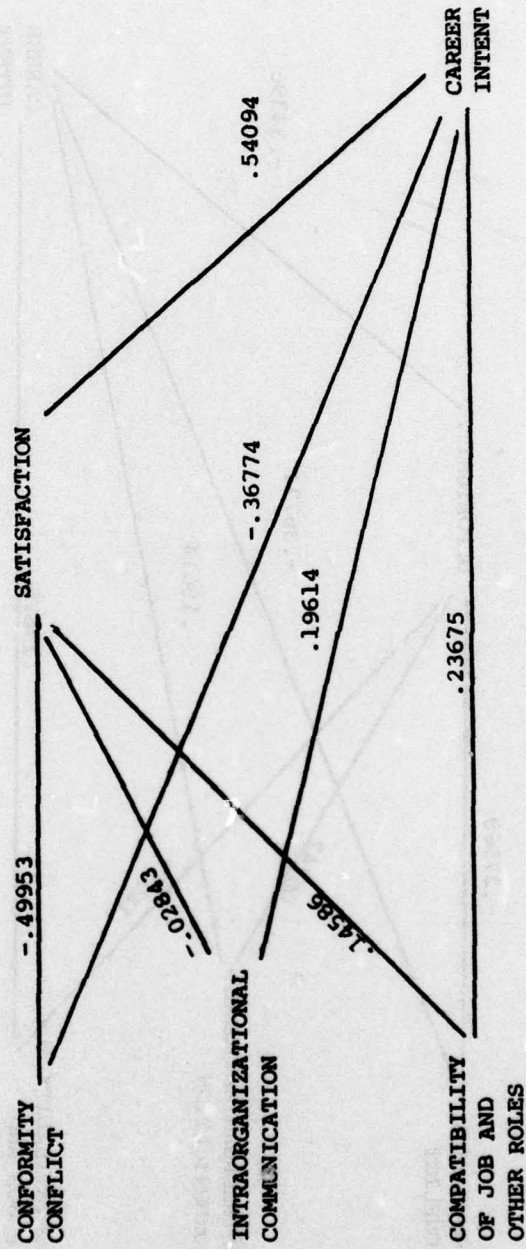


Fig. 5. Presumed Causal Order Model

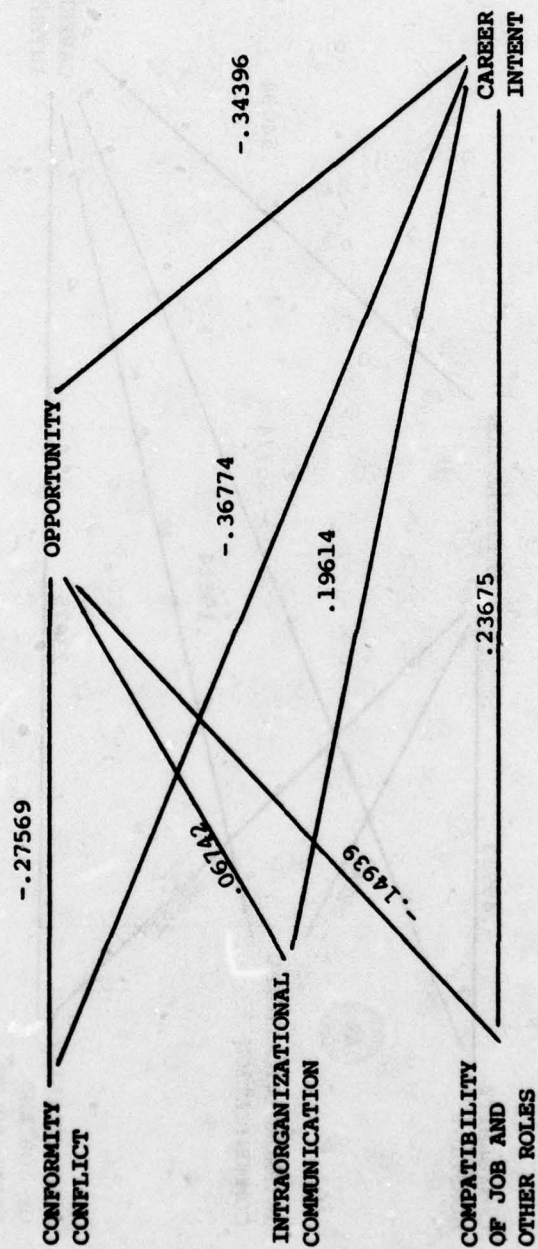
$$\sqrt{1-R^2} = \sqrt{1-.32189} = .82347$$



$$\sqrt{1-R^2} = \sqrt{1-.30369} = .83445$$

Fig. 6. Causal Model with Satisfaction the Intervening Variable

$$\sqrt{1-R^2} = \sqrt{1-.10957} = .94362$$



$$\sqrt{1-R^2} = \sqrt{1-.19933} = .89480$$

Fig. 7. Causal Model with Opportunity the Intervening Variable



TABLE 6  
EFFECTS OF THE SYNTHESIZED MODEL VARIABLES ON  
EXPRESSED CAREER INTENT WITH SATISFACTION  
AS THE INTERVENING VARIABLE

Variable	Effects		Total Causal
	Direct	Indirect	
Satisfaction	.54094	-	.54094
Conformity Conflict	-.36774	-.27021	-.63796
Compatibility of Job and Other Roles	.23675	.07890	.31565
Intraorganizational Communication	.19614	-.01537	.18076

Table 7 reflects the effect coefficients when opportunity is the presumed intervening variable.

The data in Figure 7 indicate that one of the paths was not significant. According to Bluedorn (2), a path is not significant if the path coefficient has an absolute value of less than .09 (2:109). The path from intraorganizational communication to opportunity is not significant, with a path coefficient of .06742. When opportunity was the intervening variable between the three independent variables and expressed career intent, 19.933 ( $R^2 = .19933$ ) percent of the variation was explained. Also, the three independent variables explain 10.957 ( $R^2 = .10957$ ) percent of the variation with opportunity as the dependent variable.

TABLE 7  
EFFECTS OF THE SYNTHESIZED MODEL VARIABLES ON  
EXPRESSED CAREER INTENT WITH OPPORTUNITY  
AS THE INTERVENING VARIABLE

Variable	Effects		Total Causal
	Direct	Indirect	
Opportunity	-.34396	-	-.34396
Conformity Conflict	-.36774	-.09482	-.46256
Compatibility of Job and Other Roles	.23675	.05138	.18537
Intraorganizational Communication	.19614	-.02318	.17295

Likewise, the data in Figure 6 indicate that the same path was not significant when satisfaction was the intervening variable. The path from intraorganizational communication through satisfaction to expressed career intent was insignificant with a path coefficient of  $-.02843$ . However, the three independent variables explained 32.189 ( $R^2 = .32189$ ) of the variation in satisfaction. In addition, the three independent variables explained 30.369 ( $R^2 = .30369$ ) percent of the variation in expressed career intent with satisfaction as the intervening variable.

Figure 6 and Figure 7 indicated that the path from intraorganizational communication to expressed career intent was not significant when either satisfaction or opportunity were the presumed intervening variables. Hence,



intraorganizational communication was regressed as a single variable on expressed career intent, with satisfaction and then opportunity as the intervening variable. When intraorganizational communication was regressed with satisfaction as the intervening variable, the path coefficient of .00512 was not significant. However, when intraorganizational communication was regressed on expressed career intent, with opportunity as the intervening variable, the path coefficient of .13605 was significant. Therefore, these results indicated that intraorganizational communication functions as an independent variable of expressed career intent with opportunity as the intervening variable.

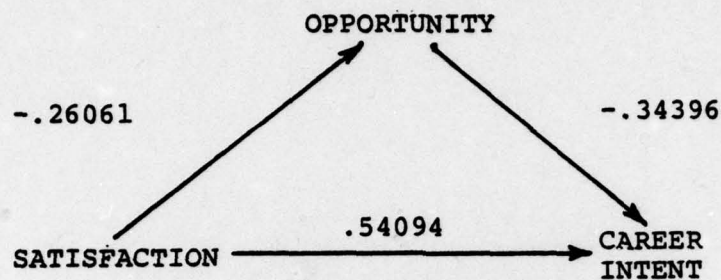
Satisfaction and opportunity are shown as intervening variables in Figure 5. When both intervening variables are used, 36.247 ( $R^2 = .36247$ ) percent of the variation of expressed career intent was explained. The path coefficients for Figure 5 are presented in Table 8.

On the basis of the foregoing analyses, three alternate models of expressed career intent-opportunity-satisfaction were developed and subjected to path analysis. Figure 8 illustrates the three models. Model 1 has the greatest amount of total causal effect. Model 3 reflects the mirror image of Model 1. Therefore, the results reflect that opportunity functions as an intervening variable between satisfaction and expressed career intent.



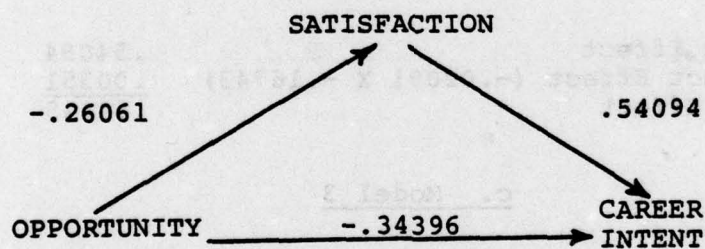
TABLE 8  
CALCULATED PATH COEFFICIENTS FOR THE PRESUMED  
CAUSAL ORDER MODEL (FIGURE 5)

Independent Variable	Dependent Variable	Path	Coefficient
Conformity Conflict	Satisfaction	P <sub>36</sub>	-.49953
Intraorganizational Communication	Satisfaction	P <sub>35</sub>	-.02843
Compatibility of Job and Other Roles	Satisfaction	P <sub>34</sub>	.14586
Satisfaction	Opportunity	P <sub>23</sub>	-.16763
Satisfaction	Career Intent	P <sub>13</sub>	.54094
Opportunity	Career Intent	P <sub>12</sub>	-.34396



Direct Effect	$.54094$
Indirect Effect ( $-.26061 \times -.34396$ )	$.08964$
Total Effect	$.63058$

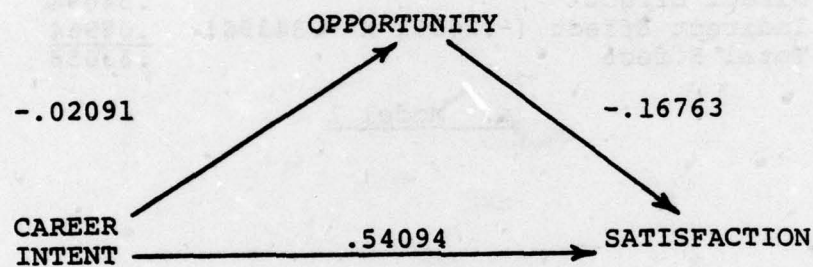
a. Model 1



Direct Effect	$-.34396$
Indirect Effect ( $-.26061 \times .54094$ )	$-.14097$
Total Effect	$-.48493$

b. Model 2

Fig. 8. Path Analysis of Satisfaction-Opportunity-Expressed Career Intent Relationships



Direct Effect	.54094
Indirect Effect ( $-.02091 \times -.16743$ )	<u>.00351</u>
Total Effect	.54445

c. Model 3

Fig. 8--Continued



When the path coefficients of intraorganizational communication in Figure 6 and Figure 7 are compared, the path coefficients have greater strength with opportunity as the intervening variable between intraorganizational communication and expressed career intent.

Since the simple linear regression analysis indicated that conformity conflict had a relationship to both satisfaction and expressed career intent, path analysis was used to determine if satisfaction was an intervening variable between conformity conflict and expressed career intent. The data in Table 6 indicates that conformity conflict had the greatest total causal effect when satisfaction was an intervening variable.

#### Summary of Path Analysis

Taken collectively, the analyses confirm that opportunity functions as an intervening variable between satisfaction and expressed career intent. Also, it was confirmed that satisfaction functions as an intervening variable between conformity conflict and expressed career intent. However, intraorganizational communication functions as an independent variable related to opportunity instead of satisfaction. As a result of the preceding analyses, a revised causal model is presented in Chapter VI.

### Demographic Results

Five demographic variables were evaluated using the Statistical Package for the Social Sciences (SPSS), subprogram T-TEST (19.267-275). The five demographic variables used were career fields, marital status, race, career military father, and shift work. The goal of the t-test analysis was to determine if the difference between the group means was statistically significant with a one-tailed test. The null hypothesis for the demographic variables was:

$$H_0: \mu_1 = \mu_2$$

The alternate statistical hypothesis was:

$$H_A: \mu_1 \neq \mu_2$$

A 0.05 significance level ( $\alpha = 0.05$ ) was used to test the null statistical hypothesis. Thus, we would accept a 5 percent chance of making a Type I error (rejecting  $H_0$  when in fact it was true). The five demographic variables were compared to the variables of the synthesized model.

Career Fields. Table 9 reflects the comparison of the variables of the synthesized model and career fields 32XXX, 42XXX, and 43XXX. The t-test values indicated that there was no statistically significant difference between the three career fields for the variables satisfaction,

TABLE 9

T-TEST COMPARISONS OF THE SYNTHESIZED MODEL  
 VARIABLES FOR CAREER FIELDS  
 (32XXX: n=74; 42XXX: n=61; 43XXX: n=94)

Variable	Career Fields	Mean	s.d.	32XXX	42XXX
Expressed Career Intent	32XXX	2.6622	1.162	-	-
	42XXX	3.1803	1.285	.008	-
	43XXX	3.0851	1.373	.018	n.s.
Satisfaction	32XXX	16.2568	4.138	-	-
	42XXX	17.4754	4.482	n.s.	-
	43XXX	17.1702	4.664	n.s.	n.s.
Opportunity	32XXX	3.7162	1.117	-	-
	42XXX	3.3607	1.155	.036	-
	43XXX	3.4362	1.160	n.s.	n.s.
Conformity Conflict	32XXX	4.5882	0.854	-	-
	42XXX	4.0981	0.872	.001	-
	43XXX	4.2263	0.940	.006	n.s.
Intraorganizational Communication	32XXX	2.7355	0.717	-	-
	42XXX	2.8595	0.715	n.s.	-
	43XXX	2.7675	0.731	n.s.	n.s.
Compatibility of Job and Other Roles	32XXX	4.5081	0.943	-	-
	42XXX	4.6926	1.038	n.s.	-
	43XXX	4.5654	1.022	n.s.	n.s.



intraorganizational communication, and compatibility of job and other roles. The 32XXX career field means were significantly lower for expressed career intent and significantly higher for conformity conflict when compared to the 42XXX and 43XXX career fields. Also, the 32XXX career field perceived a significantly higher opportunity when compared to the 42XXX career field. There were no significant differences for any of the variables between the 42XXX and 43XXX career fields.

Marital Status. Table 10 reflects the comparisons of the variables of the synthesized model between married and unmarried Air Force members. The t-test results indicate that married members perceived a significantly higher level of expressed career intent and satisfaction than unmarried members.

Race. Table 11 reflects the comparison of the member's race and the variables of the synthesized model. There were no significant differences between the races for the variables expressed career intent, opportunity, and intraorganizational communication. The t-test results indicated that "Black" members perceived a significantly lower level of conformity conflict and a higher level of compatibility of job and other roles than the other two groups. "Other" minority members perceived a significantly lower level of satisfaction than "White" members.

TABLE 10

T-TEST COMPARISONS OF THE SYNTHESIZED MODEL VARIABLES FOR MARITAL STATUS  
(Married: n=151; Unmarried: n=78)

Variable	Married		Unmarried		t-test Level of Significance
	Mean	s.d.	Mean	s.d.	
Expressed Career Intent	3.1788	1.297	2.5769	1.212	.001
Satisfaction	17.3974	4.342	16.1026	4.588	.019
Opportunity	3.4437	1.123	3.6282	1.196	n.s.
Conformity Conflict	4.2514	0.928	4.4207	0.880	n.s.
Intraorganizational Communication	2.7938	0.722	2.7582	0.723	n.s.
Compatibility of Job and Other Rules	4.6272	1.006	4.4910	0.988	n.s.

TABLE 11

T-TEST COMPARISONS OF THE SYNTHESIZED MODEL  
VARIABLES FOR RACE

(White: n=172; Black: n=21; Other: n=36)

Variable	Career Field	Mean	Std. Dev.	Race	
				Black	Other
Expressed Career Intent	Black	2.8571	1.236	-	-
	Other	2.8056	1.451	n.s.	-
	White	3.0233	1.275	n.s.	n.s.
Satisfaction	Black	17.0000	3.674	-	-
	Other	15.6944	5.132	n.s.	-
	White	17.2151	4.376	n.s.	.034
Opportunity	Black	3.4762	0.873	-	-
	Other	3.6111	1.178	n.s.	-
	White	3.4884	1.177	n.s.	n.s.
Conformity	Black	3.7758	0.647	-	-
	Other	4.4061	0.981	.006	-
	White	4.3539	0.910	.003	n.s.
Intraorganizational Communication	Black	2.9728	0.637	-	-
	Other	2.8730	0.746	n.s.	-
	White	2.7392	0.724	n.s.	n.s.
Compatibility of Job and Other Roles	Black	5.0405	0.739	-	-
	Other	4.5569	1.140	.044	-
	White	4.5297	0.987	.012	n.s.



Father's Military Status. Table 12 reflects the comparison of members whose fathers were career military members with those whose fathers were not career military members. Members whose fathers were (or are) career military members have a significantly higher career intent than those members whose fathers were not career military members. All other variables of the synthesized model did not indicate a significant difference between groups.

Shift Work. Table 13 reflects the comparison of the variables of the synthesized model and the shift the members normally worked. Variables conformity conflict and compatibility of job and other roles were not significant. Members that rotated shifts perceived a significantly higher level of opportunity and a lower level of intra-organization communication than did the members that worked day shift. Members that worked graveyard shift perceived a significantly lower level of expressed career intent and satisfaction than members that rotated shifts. Members that worked graveyard shift had a significantly lower level of expressed career intent than day shift workers.

TABLE 12

T-TEST COMPARISONS OF THE SYNTHESIZED MODEL VARIABLES FOR  
FATHER'S MILITARY STATUS  
(Was - or is - your father a career military member;  
Yes: n=36; No: n=193)

Variable	No		Yes		t-test Level of Significance
	Mean	s.d.	Mean	s.d.	
Expressed Career Intent	2.9016	1.301	3.3611	1.222	.026
Satisfaction	16.8601	4.482	17.4722	4.365	n.s.
Opportunity	3.5078	1.123	3.5000	1.298	n.s.
Conformity Conflict	4.3163	0.929	4.2707	0.834	n.s.
Intraorganizational Communication	2.7816	0.728	2.7817	0.693	n.s.
Compatibility of Job and Other Roles	4.4958	1.032	4.4958	0.813	n.s.

TABLE 13

T-TEST COMPARISONS OF THE SYNTHESIZED MODEL VARIABLES FOR WORK SHIFT  
(Day: n=118; Swing: n=38; Graveyard: n=21; Rotate: n=52)

Variable	Work Shift	Mean	s.d.	Day	Swing	Grave
Expressed Career Intent	Day	3.0339	1.383	-	-	-
	Swing	2.9737	1.150	n.s.	-	-
	Grave	2.4762	1.289	.044	n.s.	-
	Rotate	3.0385	1.188	n.s.	n.s.	.039
Satisfaction	Day	16.9492	4.464	-	-	-
	Swing	16.5000	4.660	n.s.	-	-
	Grave	15.4286	3.944	n.s.	n.s.	-
	Rotate	17.9231	4.392	n.s.	n.s.	.014
Opportunity	Day	3.3729	1.146	-	-	-
	Swing	3.5526	1.309	n.s.	-	-
	Grave	3.6667	1.065	n.s.	n.s.	-
	Rotate	3.7115	1.054	.036	n.s.	n.s.
Conformity Conflict	Day	4.2778	0.877	-	-	-
	Swing	4.2751	0.996	n.s.	-	-
	Grave	4.5186	0.765	n.s.	n.s.	-
	Rotate	4.3203	0.998	n.s.	n.s.	n.s.



TABLE 13--Continued

Variable	Work Shift	Mean	s.d.	Day	.Swing	Grave
Intraorganizational Communication	Day	2.8535	0.681	-	-	-
	Swing	2.8306	0.742	n.s.	-	-
	Grave	2.6122	0.854	n.s.	n.s.	-
	Rotate	2.6511	0.729	.041	n.s.	n.s.
Compatibility of Job	Day	4.5525	0.978	-	-	-
	Swing	4.6816	1.024	n.s.	n.s.	-
	Grave	4.6548	1.112	n.s.	n.s.	-
	Rotate	4.5413	1.008	n.s.	n.s.	n.s.

## CHAPTER VI

### DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

#### Introduction

Chapter V presented the results of the data analysis performed to test the research hypotheses and the presumed causal order of the variables. The results of the data analysis are relatively strong, particularly in light of the data collection instrument. The data collection instrument was not specifically designed to test the variables investigated in this study. However, the researchers felt that this data base could be used to investigate and at least partially test the theoretical turnover model developed in Chapter III. The data base contained a reasonable sample of the target population and was the most recent data base available. Therefore, the data base was used to test the model of turnover and for possibly providing relevant information to Air Force managers on turnover of enlisted aircraft maintenance personnel.

This chapter discusses the implications of the results of Chapter V. First, the results of the analyses are discussed and related to the proposed turnover model. Second, conclusions, including a revised turnover model, will be presented based on the statistical analyses of

Chapter V and the related discussion in this chapter. The chapter concludes with recommendations for further research in this area of turnover.

### Discussion

As a result of the statistical analyses of Chapter V, the relationships of the synthesized model were confirmed with the exception of intraorganizational communication. Conformity conflict and compatibility of job and other roles were confirmed as determinants of turnover. The role of satisfaction as an intervening variable between conformity conflict, intraorganizational communication, and expressed career intent was also confirmed. In addition, the intervening role of opportunity between satisfaction and expressed career intent was confirmed.

The path coefficients for intraorganizational communication were determined to be insignificant when either satisfaction or opportunity was functioning as the intervening variable. This result was counter to the literature on turnover and was investigated further. The researchers felt that perhaps the confounding effects of the multicollinearity among the determinants may have been causing the intraorganizational communication path coefficients to be insignificant with either intervening variable operative. Consequently, additional analyses were conducted to evaluate the path coefficients of



intraorganizational communication, as a sole determinant, with opportunity as the intervening variable and with satisfaction as the intervening variable. The results of these additional analyses revealed that intraorganizational communications path coefficient was still insignificant when satisfaction was the intervening variable ( $P_{35}=.00512$ ). However, the path coefficient for intraorganizational communication when opportunity was the intervening variable was significant ( $P_{25}=.13605$ ). Therefore, the researchers concluded that opportunity was the intervening variable between intraorganizational communication and expressed career intent on the basis of the statistical analysis. The confirmed causal order model is represented in Figure 9.

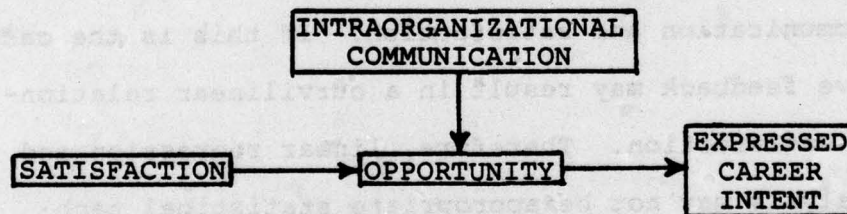


Fig. 9. Causal Order Model Indicating Intervening Role of Opportunity Between Intraorganizational Communication and Expressed Career Intent

However, contrary to the relationships shown in Figure 9, the researchers believe that the statistically supported relationship may be suspect. Since intraorganizational communication was composed of the formal and

informal communication channels in the organization, the results of the responses may be nullifying each other. Several possibilities could account for this. For example, either formal or informal communication may be perceived as high while the other may be perceived as low. The result of this situation would be a mid-level response which does not represent the real situation at all. Likewise, the majority of the members of the sample may perceive formal and informal communication at about the same level. Hence, the real effect of the communication values may be masked by two differing perceptions counteracting one another.

In addition, the researchers believe that supervisory feedback may not be linear. Our experience has been that too much feedback can be detrimental to effective communication and satisfaction. If this is the case, excessive feedback may result in a curvilinear relationship to satisfaction. Therefore, linear regression and path analysis may not be appropriate statistical techniques. In addition, the results obtained from these techniques may not be valid if this were the case.

The researchers' experiences in the field indicate that members often receive contradictory feedback. For example, a radar technician that normally works at a test bench may receive continuous positive feedback from the shop chief on his performance as an in-shop technician.



But, he may also be receiving sporadic negative feedback from the squadron commander or Deputy Commander for Maintenance because he failed to detect a complex maintenance malfunction on the flight line and caused an aircraft sortie cancellation.

The researchers believe that it is possible to become obsessed with statistical analysis and results and lose sight of the overall patterns and trends of the data. The results of the demographic patterns and trends of Tables 9 through 13 should be compared with the relationships proposed by the synthesized model. This comparison should concentrate on the relative relationships among the values within the demographic groups. For example, of the demographic groups represented in Table 9, the 32XXX career field indicated the highest group mean for conformity conflict. This group also indicated the lowest satisfaction group mean of the three career fields. The 32XXX career field has the highest group mean for perceived opportunity. Finally, they have the lowest group mean for expressed career intent. Putting these factors together confirms the turnover model relationships presented in the synthesized model. That is, an individual with high conflict will probably have lower satisfaction; with lower satisfaction, the individual should be scanning the environment harder looking for opportunities and, therefore, will probably perceive higher opportunity. With lower satisfaction and



higher opportunity, one would expect a lower career intent.

In contrast, the 42XXX career field indicated the lowest group mean for conformity conflict; the highest group mean for satisfaction; the lowest group mean for opportunity and, as one would expect, the highest expressed career intent. However, a single determinant should not be considered in isolation. The determinants should be considered together, through the intervening variables and their resulting effect on expressed career intent.

Also, the effects of exogenous variables on a member's attitudes and behaviors should not be forgotten. For example, if the determinants are considered as a group for the data in Table 12, one would expect that the satisfaction and expressed career intent values would be similar. However, members whose fathers were or are career military members indicated higher satisfaction and significantly higher expressed career intent. These results were somewhat unexpected. But, one should consider that a military member raised in a military family has different expectations of military life than someone who is not familiar with the military environment. These different expectations may be what caused the differences in their satisfaction and expressed career intent levels.

In summary, the researchers believe that relationships should be examined in light of statistical analysis, patterns and trends in the data, and the exogenous variables and their effects. Also, when dealing with sociological research, the results reflect the values and perceptions of a respondent at a single point in time. The attitudes and behaviors of an individual are dynamic in nature and subject to changes over time. The researchers believe that though perceptions change, they change gradually. The Air Force no longer has the funding nor the manpower to waste valuable talent in the form of technically trained aircraft maintenance personnel. Some form of predictive tool is needed to provide the information necessary to manage the future rather than reacting to the past.

The revised model of turnover presented in the next section is a step in this direction. Managers who understand some of the mechanisms at work in their personnel can operate from a position of knowledge, and can use their training and expertise to minimize the negative effects on their personnel with their organizations. Turnover is not a decision made on the spur of the moment but rather the effect of long-term effects within and without the organizations. The minimization of the negative effects within Air Force organizations reduces the chances that our technically trained personnel will look for the opportunities



in the civilian marketplace. The savings in personnel costs and training costs would more than offset the costs of determining the mechanisms at work. Again, the revised model provides some of the insights required to better manage our valuable personnel resources.

#### Revised Model

The synthesized model presented in Chapter III provided the starting point for this research. The combination of the synthesized model of turnover, the research results of Chapter V, and the conclusions presented in this chapter, led the researchers to the revised model of turnover for Air Force enlisted aircraft maintenance personnel presented in Figure 10. A comparison between the synthesized model and the revised model indicates that there has been little change from the original conceptual model as a consequence of the research analyses and results. The researchers consider the revised model a realistic conceptual framework for the study of turnover of Air Force enlisted aircraft maintenance personnel.

#### Recommendations for Further Research

As a result of conducting this study, the 1977 Air Force Quality of Life survey presented a number of inherent restraints in determining the applicability of the synthesized model of turnover presented in Chapter III. The questions used in this research were not designed



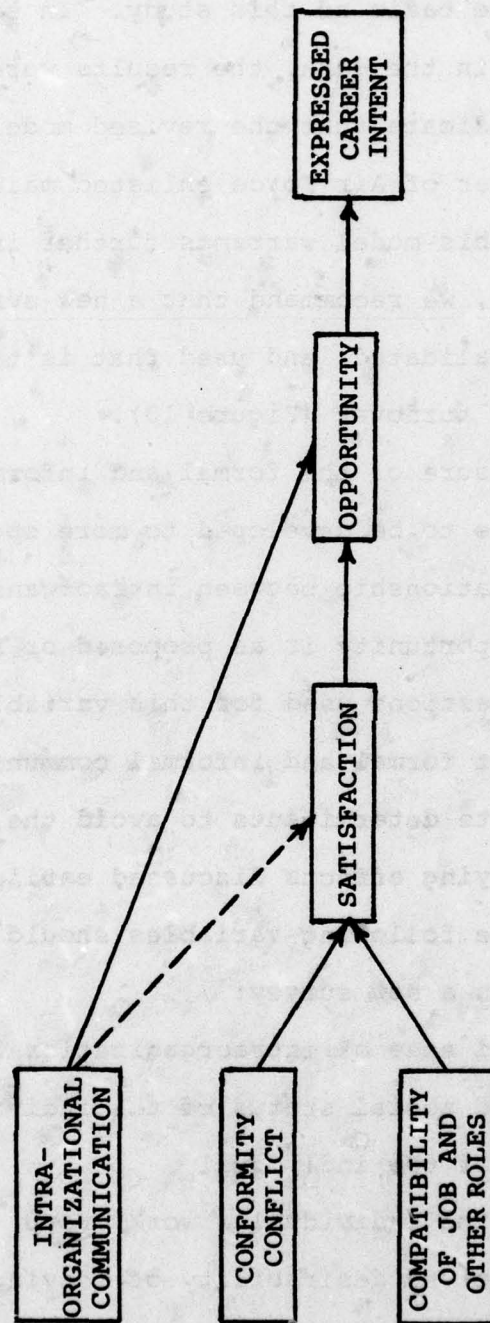


Fig. 10. Revised Model of Turnover

specifically to test the specific variables or relationships that formed the basis of this study. In spite of the weaknesses inherent in the data, the results were sufficiently strong to indicate that the revised model is applicable to turnover of Air Force enlisted maintenance personnel and that this model warrants further investigation. In particular, we recommend that a new survey instrument be developed, validated, and used that is tailored to the revised model of turnover (Figure 10).

A better measure of the formal and informal communication channels needs to be developed to more specifically determine if the relationship between intraorganizational communication and opportunity is as proposed or is actually a function of the questions used for this variable. Furthermore, we suggest that formal and informal communication be considered as separate determinants to avoid the possibility of the nullifying effects discussed earlier. We also suggest that the following variables should be specifically measured in a new survey:

1. Perceived ease of intraorganizational transfer
2. Perceived social status of the individual
3. The age of the individual
4. Size of the individual's work group
5. The perceived desirability of leaving the

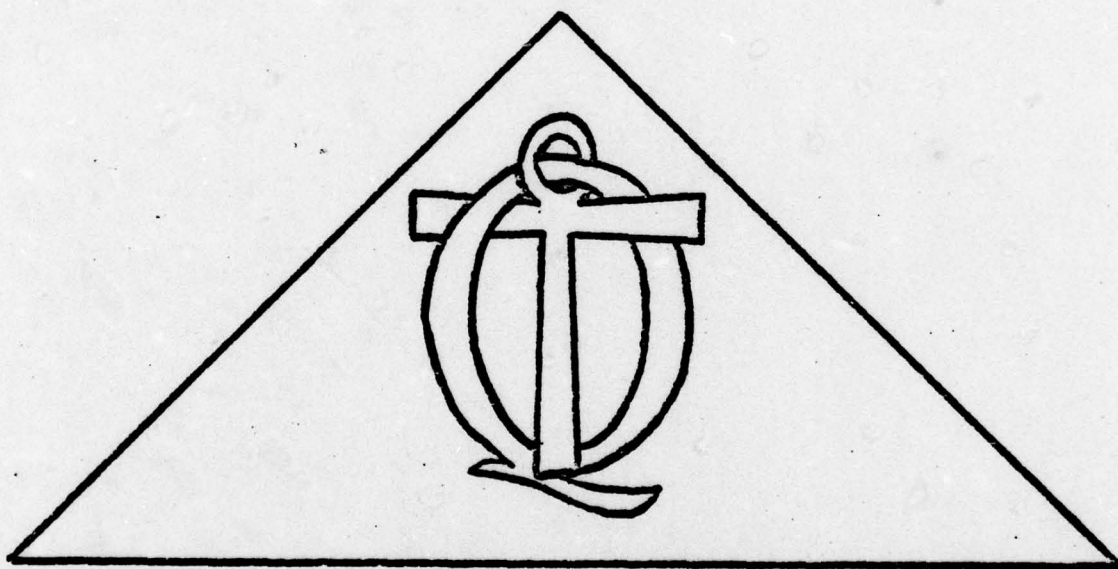
Air Force

6. The spouse's satisfaction with the Air Force
7. The effect of temporary duty assignments
8. The effect of duties not related to an individual's primary career field
9. The number of organizations the individual perceives as available to him in the civilian world
10. The size of the individual's organization
11. The individual's propensity to search for alternative employment
12. The number of non-military activities the individual is active in during off duty hours
13. The type influences the squadron commander, Deputy Commander for Maintenance, and the Wing Commander have on the individual's organization



APPENDIX A  
SURVEY INSTRUMENT

**United States Air Force**  
**Quality Of Air Force Life**  
**Active Duty**  
**Air Force Personnel Survey**



SECOND EDITION

USAF SCN 77-37  
MARCH 1977

LEADERSHIP/MOTIVATION DIVISION  
HUMAN RESOURCES DEVELOPMENT  
DIRECTORATE OF PERSONNEL PLANS  
HQ UNITED STATES AIR FORCE

# United States Air Force

## FOREWORD

This survey asks what you think about the Quality of Air Force Life. By completing it, you will provide Headquarters USAF with your attitudes and opinions about a number of areas of interest to the Air Force. Your responses are anonymous. They will be combined with the answers of all others taking the survey and compiled for use in forming future personnel plans and policies. Although the survey uses a special answer sheet for machine recording, a comments page is included at the end of the survey. You are encouraged to provide your comments on any subject of importance which you would consider helpful to Headquarters USAF in its efforts to insure the highest possible quality of Air Force life.



## INSTRUCTIONS FOR COMPLETING SURVEY

Please do not fold, staple, or otherwise damage the answer sheet.

Select only one answer to each question.

Mark your answers on the answer sheet. It is not necessary to write on the survey itself. Please use a No. 2 pencil.

Be sure to mark your answers carefully so that you enter them opposite the same answer sheet number as survey question number.

Be sure that your answer marks are heavy and that you blacken the oval-shaped space. Erase all changes completely and carefully so as not to tear the answer sheet.

	A	B	C	D
Right Way				
to Mark	o	o	o	o
Answer Sheet	o	o	o	o
	A	B	C	D
	o	o	o	o
Wrong Way	o	o	o	o
to Mark	o	o	o	o
Answer Sheet	o	o	o	o
	o	o	o	o

Since this survey is strictly anonymous, please do not write your name or your SSAN on either your answer sheet or survey booklet.

## PRIVACY ACT STATEMENT

In accordance with paragraph 30, AFR 12-35, Air Force Privacy Act Program, the following information about this survey is provided as required by the Privacy Act of 1974:

- a. Authority. This survey information is authorized for solicitation by Federal Statute Title 10, United States Code, Section 8012, Executive Order 9397, 22 Nov 1943, DoDI 1100.13, 17 Apr 1968, and AFR 30-23, 22 Sep 1976.
- b. Principal Purpose. This survey is being conducted to gain the attitudes and opinions of Air Force members on a variety of subjects of interest to Headquarters USAF.
- c. Routine Use. The survey data will be converted to statistical information for use by decision makers in development of future personnel plans and policies.
- d. Participation in this survey is entirely voluntary.
- e. No adverse action of any kind may be taken against any individual who elects not to participate in any or all of this survey.

1-2. Your survey administrator will provide you with a 2-letter code for your base. Mark the first letter of this code in item 1 and the second letter in item 2 of your answer sheet.

3. What is your present active duty grade?

- |                          |                           |
|--------------------------|---------------------------|
| A. Colonel               | I. Senior Master Sergeant |
| B. Lieutenant Colonel    | J. Master Sergeant        |
| C. Major                 | K. Technical Sergeant     |
| D. Captain               | L. Staff Sergeant         |
| E. First Lieutenant      | M. Sergeant               |
| F. Second Lieutenant     | N. Senior Airman          |
| G. Warrant Officer       | O. Airman First Class     |
| H. Chief Master Sergeant | P. Airman                 |
|                          | Q. Airman Basic           |

4. What is your command of assignment (the command that maintains your personnel records)?

- |  |   |
|--|---|
| A. Alaskan Air Command                     | N. Air Force Data Automation Agency           |
| B. U.S. Air Force Academy                  | O. Headquarters Command                       |
| C. Aerospace Defense Command               | P. Military Airlift Command                   |
| D. U.S. Air Forces in Europe               | Q. Pacific Air Forces                         |
| E. Air Force Accounting and Finance Center | R. Strategic Air Command                      |
| F. Air Force Logistics Command             | S. Tactical Air Command                       |
| G. Air Force Systems Command               | T. USAF Security Service                      |
| H. Air Reserve Personnel Center            | U. Air Force Military Personnel Center        |
| I. Air Training Command                    | V. Air Force Inspection and Safety Center     |
| J. Air University                          | W. Air Force Audit Agency                     |
| K. Headquarters Air Force Reserve          | X. Air Force Office of Special Investigations |
| L. Headquarters USAF                       | Y. Other                                      |
| M. Air Force Communications Service        |   |

5. How much total active federal military service have you completed?

- |                              |                              |
|------------------------------|------------------------------|
| A. Less than 1 year          | Q. 15 years but less than 17 |
| B. 1 year but less than 2    | R. 17 years but less than 18 |
| C. 2 years but less than 3   | S. 18 years but less than 19 |
| D. 3 years but less than 4   | T. 19 years but less than 20 |
| E. 4 years but less than 5   | U. 20 years but less than 21 |
| F. 5 years but less than 6   | V. 21 years but less than 22 |
| G. 6 years but less than 7   | W. 22 years but less than 23 |
| H. 7 years but less than 8   | X. 23 years but less than 24 |
| I. 8 years but less than 9   | Y. 24 years but less than 25 |
| J. 9 years but less than 10  | Z. 25 years but less than 26 |
| K. 10 years but less than 11 | 1. 26 years but less than 27 |
| L. 11 years but less than 12 | 2. 27 years or more          |
| M. 12 years but less than 13 |                              |
| N. 13 years but less than 14 |                              |
| O. 14 years but less than 15 |                              |
| P. 15 years but less than 16 |                              |

6. What is your highest level of education now (include accepted GED credits)?

- A. Some high school (did not graduate)
- B. High school graduate (no college)
- C. Trade or technical school (no college)
- D. Some college, but less than one year
- E. One year college, but less than two
- F. Two years college, but less than three (including two-year associate degree)
- G. Three years or more college, no degree
- H. Registered nurse diploma program
- I. College degree (BS, BA, or equivalent, except LL.B)
- J. Graduate work beyond bachelor degree (no master's degree)
- K. Master's degree
- L. Postgraduate work beyond master's degree
- M. Doctorate degree (includes LL.B, J.D., D.D.S., M.D., and D.V.M.)



7. What is your marital status?

- A. Married and spouse is not a member of a military service
- B. Married and spouse is a member of a military service
- C. Never been married
- D. Divorced and not remarried
- E. Legally separated
- F. Widower/widow

8. Was (or is) your father a career military member?

- A. No
- B. Yes

9. Are you a regular or reserve officer?

- A. Not applicable, I am enlisted
- B. Reserve
- C. Regular

10. What was the source of your commission?

- A. Not applicable, I am enlisted
- B. OTS
- C. OCS
- D. ROTC
- E. AECP
- F. Aviation Cadet
- G. Navigation Cadet
- H. USAFA
- I. USMA
- J. USNA
- K. Other

11. How many dependents do you have? Do not include yourself.

- A. None
- B. One
- C. Two
- D. Three
- E. Four
- F. Five
- G. Six
- H. Seven
- I. Eight or more

12. Which one of the following do you consider yourself?

- A. Black
- B. Spanish Speaking Origin (Cuban, Puerto Rican, Mexican American, Spanish Descent)
- C. American Indian
- D. Asian Origin (Chinese, Japanese, Korean, Filipino or Asian American)
- E. White (Other than Spanish Speaking Origin)
- F. Other

13. What is your sex?

- A. Male
- B. Female



14. Which one of the following best describes your attitude toward making the Air Force a career?

- A. Definitely intend to make the Air Force a career
- B. Most likely will make the Air Force a career
- C. Undecided
- D. Most likely will not make the Air Force a career
- E. Definitely do not intend to make the Air Force a career

15. Enter the code for the first digit of your duty Air Force Specialty Code (AFSC) opposite item 15 on your answer sheet.

- |      |      |
|------|------|
| A. 0 | F. 5 |
| B. 1 | G. 6 |
| C. 2 | H. 7 |
| D. 3 | I. 8 |
| E. 4 | J. 9 |

16. Enter the code for the second digit of your duty AFSC opposite item 16 on your answer sheet.

- |      |      |
|------|------|
| A. 0 | F. 5 |
| B. 1 | G. 6 |
| C. 2 | H. 7 |
| D. 3 | I. 8 |
| E. 4 | J. 9 |

17. Enter the code for the third digit of your duty AFSC opposite item 17 on your answer sheet.

- |      |      |
|------|------|
| A. 0 | F. 5 |
| B. 1 | G. 6 |
| C. 2 | H. 7 |
| D. 3 | I. 8 |
| E. 4 | J. 9 |

18. What is your current primary aeronautical rating?

- A. Pilot
- B. Navigator
- C. Flight Surgeon
- D. Other aeronautical rating
- E. Nonrated

19. What shift do you normally work?

- A. Day shift
- B. Swing shift
- C. Graveyard shift
- D. Rotate shifts

The following four questions address the subjects of economic standard and security. Please rate the degree of importance of these concepts to you and your degree of satisfaction with them based on the descriptions shown below:

ECONOMIC STANDARD: Satisfaction of basic human needs such as food, shelter, clothing; the ability to maintain an acceptable standard of living.

20. What degree of importance do you attach to the above? (Select one of the seven points on the importance scale)

A.....B.....C.....D.....E.....F.....G
Moderate High Very High
Importance Importance Importance

21. To what degree are you satisfied with the ECONOMIC STANDARD aspects of your life? (Select one of the seven points on the satisfaction scale)

A.....B.....C.....D.....E.....F.....G
Highly Highly
Dissatisfied Neutral Satisfied

ECONOMIC SECURITY: Guaranteed employment; retirement benefits; insurance; protection for self and family.

22. What degree of importance do you attach to the above?

A.....B.....C.....D.....E.....F.....G
Moderate High Very High
Importance Importance Importance

23. To what degree are you satisfied with the ECONOMIC SECURITY aspects of your life?

A.....B.....C.....D.....E.....F.....G
Highly Highly
Dissatisfied Neutral Satisfied

24. Do you hold a second job?

A. No

Yes, I work

- B. 1-5 hours per week
- C. 6-10 hours per week
- D. 11-20 hours per week
- E. 21-30 hours per week
- F. over 30 hours per week

25. Does your spouse work?

A. Not applicable, I am not married or I am legally separated

I am married and my spouse

- B. Resides with me, and has a paying job
- C. Resides with me, and does not work
- D. Does not reside with me, and has a paying job
- E. Does not reside with me, and does not work

26. The main reason that I have a second job, and/or that my spouse works is that we have to in order to make ends meet.
- A. Not applicable
  - B. Strongly disagree
  - C. Disagree
  - D. Undecided
  - E. Agree
  - F. Strongly agree
27. Do you or your dependents, if any, currently receive Federal, state, county, civic, or community (public) assistance?
- A. No
  - B. Yes, food stamps only
  - C. Yes, monetary payments only
  - D. Yes, food only
  - E. Yes, combination of the above
  - F. Yes, other
28. Are you now eligible for and do you receive food stamps?
- A. I am not eligible for food stamps
  - B. I am eligible for food stamps but do not use them
  - C. I am now receiving and using food stamps
  - D. I do not know if I am eligible for food stamps; but, I would not use them if I were eligible
  - E. I do not know if I am eligible for food stamps; but I would use them if I were eligible
29. How do you think your military pay (including all allowances and fringe benefits) compares with pay in civilian employment for similar work?
- A. Military pay is far higher than civilian
  - B. Military pay is somewhat higher than civilian
  - C. Both about equal
  - D. Military pay is somewhat less than civilian
  - E. Military pay is far less than civilian
30. If I left the Air Force tomorrow, I think it would be very difficult to get a job in private industry with pay, benefits, duties, and responsibilities comparable with those of my present job.
- A. Strongly disagree
  - B. Disagree
  - C. Undecided
  - D. Agree
  - E. Strongly agree



31. The Air Force is providing enough information to its members to permit them to determine the current status of actions which may impact on their fringe benefits (commissary, retirement, medical care, etc.).

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

The following is a list of some Air Force benefits. Using the scale shown below, please indicate the importance of each benefit to you and your family now. Be sure the item number on your answer sheet is the same as the item number you are answering on the survey booklet.

	<u>Low</u>		<u>Medium</u>			<u>High</u>		<u>Undecided,</u>
	<u>Importance</u>		<u>Importance</u>			<u>Importance</u>		<u>Don't know</u>
32. 30-days annual leave	A	B	C	D	E	F	G	H
33. Base exchange	A	B	C	D	E	F	G	H
34. Base housing	A	B	C	D	E	F	G	H
35. Military hospitals	A	B	C	D	E	F	G	H
36. Commissary	A	B	C	D	E	F	G	H
37. CHAMPUS	A	B	C	D	E	F	G	H
38. Legal assistance	A	B	C	D	E	F	G	H
39. Education and training	A	B	C	D	E	F	G	H
40. Survivor benefits	A	B	C	D	E	F	G	H
41. Dependents indemnity compensation	A	B	C	D	E	F	G	H
42. Retirement	A	B	C	D	E	F	G	H
43. Travel and transportation entitlements	A	B	C	D	E	F	G	H
44. Income tax advantage	A	B	C	D	E	F	G	H
45. Insurance discounted	A	B	C	D	E	F	G	H
46. Recreation facilities	A	B	C	D	E	F	G	H
47. Veterans benefits (GI Bill, etc.)	A	B	C	D	E	F	G	H

Listed below are a number of factors which have been associated with favorable attitudes toward an Air Force career.

#### FAVORABLE FACTORS

- A. Opportunity for training and education in the Air Force
- B. My Air Force job (challenging, provides sense of accomplishment, etc.)
- C. Pay and allowances
- D. Housing
- E. Promotion system and opportunity
- F. Fringe benefits (medical and dental care, BX, commissary, etc.)
- G. Leadership and supervision in the Air Force
- H. Travel and new experiences
- I. Have "say" in future assignments
- J. Security of Air Force life
- K. Air Force policies and procedures
- L. The retirement system
- M. Opportunity to serve my country
- N. Some other factor
- O. I do not intend to make the Air Force a career

48. Select the one factor which TODAY would influence you the most to make the Air Force a career.

Listed below are a number of factors which have been associated with unfavorable attitudes toward an Air Force career.

#### UNFAVORABLE FACTORS

- A. Family separation
- B. My Air Force job (little challenge, little sense of accomplishment, etc.)
- C. Pay and allowances
- D. Housing
- E. Promotion selection system
- F. Promotion opportunity
- G. Fringe benefits (medical and dental care, BX, commissary, etc.)
- H. Leadership and supervision in the Air Force
- I. Frequent PCS moves
- J. Little "say" in future assignments
- K. Insecurity of Air Force life
- L. The people
- M. Air Force policies and procedures
- N. Some other factor
- O. Nothing unfavorable

49. Select the one factor which TODAY would influence you the most NOT to make the Air Force a career.

50. An Air Force base is a desirable place to live.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

Please rate the degree of importance of free time to you and your degree of satisfaction with it based on the following description:

**FREE TIME:** Amount, use, and scheduling of free time alone, or in voluntary associations with others; variety of activities engaged in.

51. What degree of importance do you attach to the above?

A.....	B.....	C.....	D.....	E.....	F.....	G
Moderate			High			Very High
Importance			Importance			Importance

52. To what degree are you satisfied with the FREE TIME aspects of your life?

A.....	B.....	C.....	D.....	E.....	F.....	G
Highly			Neutral			Highly
Dissatisfied						Satisfied

53. What percent of your friends are Air Force members?

- A. None
- B. 1-19%
- C. 20-39%
- D. 40-59%
- E. 60-79%
- F. 80-99%
- G. All

The following is a list of Federal holidays:

1 Jan 77 - New Year's Day	11 Oct 76 - Columbus Day
16 Feb 77 - President's Day	25 Oct 76 - Veterans' Day
31 May 76 - Memorial Day	25 Nov 76 - Thanksgiving Day
4 Jul 76 - Independence Day	25 Dec 76 - Christmas Day
6 Sep 76 - Labor day	

54. During the past year how many of these nine holidays were you not able to take off because you were required to be at work in a duty status?

- |           |           |
|-----------|-----------|
| A. 0 days | F. 5 days |
| B. 1 day  | G. 6 days |
| C. 2 days | H. 7 days |
| D. 3 days | I. 8 days |
| E. 4 days | J. 9 days |

Please rate the degree of importance of your work to you and your degree of satisfaction with it based on the following description:

**WORK:** Doing work that is personally meaningful and important; pride in my work; job satisfaction; recognition for my efforts and my accomplishments on the job.

55. What degree of importance do you attach to the above?

A.....	B.....	C.....	D.....	E.....	F.....	G
Moderate			High			Very High
Importance			Importance			Importance

56. To what degree are you satisfied with the WORK aspects of your life?

A.....	B.....	C.....	D.....	E.....	F.....	G
Highly			Neutral			Highly
Dissatisfied						Satisfied



57. Which one of the following shows how much of the time you feel satisfied with your job?

- A. All the time
- B. Most of the time
- C. A good deal of the time
- D. About half of the time
- E. Occasionally
- F. Seldom
- G. Never

58. Choose the one of the following statements which best tells how well you like your job.

- A. I hate it
- B. I dislike it
- C. I don't like it
- D. I am indifferent to it
- E. I like it
- F. I am enthusiastic about it
- G. I love it

59. Which one of the following best tells how you feel about changing your job?

- A. I would quit this job at once if I could
- B. I would take almost any other job in which I could earn as much as I am earning now
- C. I would like to change both my job and my occupation
- D. I would like to exchange my present job for another one
- E. I am not eager to change my job, but I would do so if I could get a better job
- F. I cannot think of any jobs for which I would exchange
- G. I would not exchange my job for any other

60. Which one of the following shows how you think you compare with other people?

- A. No one likes his job better than I like mine
- B. I like my job much better than most people like theirs
- C. I like my job better than most people like theirs
- D. I like my job about as well as most people like theirs
- E. I dislike my job more than most people dislike theirs
- F. I dislike my job much more than most people dislike theirs
- G. No one dislikes his job more than I dislike mine

Listed below are six characteristics which could be present on any job. Using the scale below, indicate the degree to which you would like to have each characteristic present in your job.

	Moderate or Less		High		Extremely High	
61. Stimulating and challenging work	A	B	C	D	E	F G
62. Chances to exercise independent thought and action in my job	A	B	C	D	E	F G
63. Opportunities to learn new things from my work	A	B	C	D	E	F G
64. Opportunities to be creative and imaginative in my work	A	B	C	D	E	F G
65. Opportunities for personal growth and development in my job	A	B	C	D	E	F G
66. A sense of worthwhile accomplishment in my work	A	B	C	D	E	F G

67. Which one of the following factors do you consider the most essential for having a satisfying job?
- A. Challenging work
  - B. Recognition for my work
  - C. Sense of achievement
  - D. Encouragement to use initiative and creativity
  - E. Having responsibility for a job
  - F. Having a good supervisor
68. How do you evaluate your present Air Force job?
- A. Not at all challenging
  - B. Not very challenging
  - C. Somewhat challenging
  - D. Challenging
  - E. Very challenging
69. My present job makes good use of my training and ability.
- A. Strongly disagree
  - B. Disagree
  - C. Undecided
  - D. Agree
  - E. Strongly agree
70. Do you think your present job is preparing you to assume future positions of greater responsibility?
- A. Definitely no
  - B. Probably no
  - C. Undecided
  - D. Probably yes
  - E. Definitely yes
71. For your next assignment, do you want a job which has greater responsibility than your current job?
- A. Definitely no
  - B. Probably no
  - C. Not sure
  - D. Probably yes
  - E. Definitely yes
72. Do you feel that the work you are now doing is appropriate to the grade you hold:
- A. My grade is much too high for the work I am doing
  - B. My grade is somewhat too high for the work I am doing
  - C. My grade is about right for the work I am doing
  - D. My grade is somewhat too low for the work I am doing
  - E. My grade is much too low for the work I am doing
73. What is your estimate of the average number of hours per week you spend on the job?
- A. Less than 30 hours
  - B. 31 - 35
  - C. 36 - 40
  - D. 41 - 45
  - E. 46 - 50
  - F. 51 - 55
  - G. 56 - 60
  - H. More than 60



74. The Air Force requires me to participate in too many activities that are not related to my job.
- A. Strongly disagree
  - B. Disagree
  - C. Undecided
  - D. Agree
  - E. Strongly agree
75. Air Force members should take more interest in mission accomplishment and less interest in their personal concerns.
- A. Strongly disagree
  - B. Disagree
  - C. Inclined to disagree
  - D. Undecided
  - E. Inclined to agree
  - F. Agree
  - G. Strongly agree
76. I wish that more Air Force members had a genuine concern for national security.
- A. Strongly disagree
  - B. Disagree
  - C. Inclined to disagree
  - D. Undecided
  - E. Inclined to agree
  - F. Agree
  - G. Strongly agree

Listed below are 10 concepts which can be related to your Air Force life (questions 77-86). Rank them in order of their importance to you. Example: If you believe that "A comfortable life" (number 77) is the most important to you of the 10 concepts, you would mark an "A" for question 77 on your answer sheet. If you believe that "loyalty" is the second most important concept, you would mark a "B" for question 81 on your answer sheet. Continue ranking until you have marked a "J" for the concept of least importance to you.

- |                         |                         |
|-------------------------|-------------------------|
| A. Most important       | F. Sixth most important |
| B.                      | G.                      |
| C.                      | H.                      |
| D.                      | I.                      |
| E. Fifth most important | J. Least important      |

- 77. A comfortable life (a good salary, few worries about money)
- 78. A sense of accomplishment (making a meaningful contribution)
- 79. Family security (taking care of my family)
- 80. Individual freedom (independence, being free to choose)
- 81. Loyalty (dedication to military and its mission)
- 82. Personal recognition (having personal accomplishments recognized and rewarded)
- 83. National security (protection from attack, an effective military)
- 84. Integrity (absolute honesty, devotion to duty)
- 85. Trust (being able to depend on those around me, including my leaders, my peers, and my subordinates)
- 86. Job satisfaction (doing work that I like)



Please rate the degree of importance of leadership/supervision to you and your degree of satisfaction with it based on the following description:

**LEADERSHIP/SUPERVISION:** My supervisor has my interests and that of the Air Force at heart; keeps me informed; approachable and helpful rather than critical; good knowledge of the job.

87. What degree of importance do you attach to the above? (Select one of the seven points)

A.....	B.....	C.....	D.....	E.....	F.....	G
Moderate			High			Very High
Importance			Importance			Importance

88. To what degree are you satisfied with the LEADERSHIP/SUPERVISION aspects of your life? (Select one of the seven points)

A.....	B.....	C.....	D.....	E.....	F.....	G
Highly						Highly
Dissatisfied			Neutral			Satisfied

89. What is your opinion of the leadership ability of your immediate supervisor?

A. Excellent  
B. Above average  
C. Average  
D. Below average  
E. Poor

90. What is your opinion of the quality of leadership in the Air Force?

A. Excellent  
B. Above average  
C. Average  
D. Below average  
E. Poor

91. The high degree of responsibility assigned to younger, lower ranking Air Force members places too great a strain upon them.

A. Strongly disagree  
B. Disagree  
C. Inclined to disagree  
D. Undecided  
E. Inclined to agree  
F. Agree  
G. Strongly agree

Of the following descriptions of discipline, select the one which most nearly corresponds to your definition of what discipline should be on the part of an individual in a peacetime Air Force.

92. Discipline is the willingness of the individual to:

A. Respond quickly and without question to the direct lawful orders of a superior  
B. Adapt his behavior to the expectations of the organization  
C. Self-direct his behavior so that it helps in the accomplishments of the mission of the organization.

93. What is your opinion of discipline in today's Air Force?

A. Too strict  
B. Somewhat strict  
C. About right  
D. Somewhat lenient  
E. Too lenient

Listed below are 23 factors or policies which affect Air Force personnel. Using the scale listed immediately below, please rate each of the factors. Mark only one response for each item.

- A. Standard too strict, enforcement too strict
- B. Standard too strict, enforcement about right
- C. Standard too strict, enforcement too lax
- D. Standard about right, enforcement too strict
- E. Standard about right, enforcement about right
- F. Standard about right, enforcement too lax
- G. Standard too lax, enforcement too strict
- H. Standard too lax, enforcement about right
- I. Standard too lax, enforcement too lax

- 94. Overall personal appearance.
- 95. Wear of the uniform.
- 96. Haircuts.
- 97. Mustaches.
- 98. Beard policy.
- 99. Military courtesy and customs.
- 100. Personnel weight control program.
- 101. What my immediate supervisor expects of me.
- 102. My commander's policies and procedures.
- 103. Officer/enlisted on-the-job relationships.
- 104. Drills and ceremonies.
- 105. Respect for supervisors.
- 106. Safety procedures.
- 107. Working hours.
- 108. Leave procedures.
- 109. Living in on-base family housing
- 110. Living in on-base dormitories
- 111. Quality of work expected on the job.
- 112. Quantity of work expected on the job.
- 113. Officer supervisor/subordinate relationships.
- 114. Enlisted supervisor/subordinate relationships.
- 115. Unit mission accomplishment.
- 116. Air Force life in general.



The following is a list of statements about leadership/supervision. Please indicate whether you agree or disagree with each statement using the scale shown.

	<u>Strongly</u> <u>Disagree</u>	<u>Disagree</u>	<u>Undecided</u>	<u>Agree</u>	<u>Strongly</u> <u>Agree</u>
117. The Air Force does a good job of keeping me informed about what is going on.	A	B	C	D	E
118. More supervision of member performance and behavior is needed at lower levels within the Air Force.	A	B	C	D	E
119. Persons in my work group encourage each other to work as a team.	A	B	C	D	E
120. My supervisor tries to get my ideas before making decisions that are important to me.	A	B	C	D	E
121. Persons in my work group offer each other new ideas for solving job-related problems.	A	B	C	D	E
122. My supervisor encourages the people in my work group to exchange opinions and ideas.	A	B	C	D	E
123. I would say that the lowest level supervisors in my organization usually have enough say or influence on what goes on.	A	B	C	D	E
124. When decisions are being made in my organization, the persons who will be affected most are asked for their ideas.	A	B	C	D	E
125. Persons who do not supervise others in my organization have an adequate amount of say or influence on what goes on.	A	B	C	D	E
126. Information is usually widely shared in my organization so that those who make the decisions will base their decisions on the best available know-how.	A	B	C	D	E
127. I get the information I need to do my job in the best possible way.	A	B	C	D	E
128. When I talk to people in my work group, they pay attention to what I am saying.	A	B	C	D	E
129. My supervisor is friendly and easy to approach.	A	B	C	D	E
130. My supervisor pays attention to what I have to say.	A	B	C	D	E



131. How often do you and your supervisor get together to set your personal performance objectives?
- A. Never
  - B. Seldom
  - C. Sometimes
  - D. Frequently
  - E. Very frequently
132. How often are you given feedback from your supervisor about your job performance?
- A. Never
  - B. Seldom
  - C. Sometimes
  - D. Frequently
  - E. Very frequently
133. Does your immediate supervisor give you recognition for a job well done?
- A. Never
  - B. Seldom
  - C. Sometimes
  - D. Frequently
  - E. Always
134. What kind of influence does your immediate supervisor have on your organization?
- A. Very favorable
  - B. Favorable
  - C. Neutral
  - D. Unfavorable
  - E. Very unfavorable
135. Are you given the freedom you need to do your job well?
- A. Never
  - B. Seldom
  - C. Sometimes
  - D. Often
  - E. Always

Please rate the degree of importance of the concept of equity to you and your degree of satisfaction with it based on the following description:

EQUITY: Equal opportunity in the Air Force; a fair chance at promotion; an even break in my job/assignment selections.

136. What degree of importance do you attach to the above?

A.....	B.....	C.....	D.....	E.....	F.....	G
Moderate			High			Very High
Importance			Importance			Importance

137. To what degree are you satisfied with the EQUITY aspects of your life?

A.....	B.....	C.....	D.....	E.....	F.....	G
Highly						Highly
Dissatisfied			Neutral			Satisfied

138. An individual can get more of an even break in civilian life than in the Air Force.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

139. The Air Force promotion system is effective (i.e., the best qualified people are generally selected for promotion).

- A. Strongly disagree
- B. Disagree
- C. Inclined to disagree
- D. Undecided
- E. Inclined to agree
- F. Agree
- G. Strongly agree

140. What of the following best represents your opinion of the E-5/6/7 WAPS factors?

- A. Not enough weight is given to performance reports
- B. Not enough weight is given to tests
- C. Not enough weight is given to seniority
- D. Not enough weight is given to decorations
- E. Too much weight is given to performance reports
- F. Too much weight is given to tests
- G. Too much weight is given to seniority
- H. Too much weight is given to decorations
- I. No opinion

141. On the same jobs as men, do Air Force women tend to do more, less, or about the same amount of work?

- A. Much more
- B. More
- C. About the same
- D. Less
- E. Much less

142. How does your supervisor deal with your women co-workers?

- A. Not applicable, there are no women in my unit

My supervisor is a woman and she:

- B. Expects more from the women workers than the men
- C. Treats men and women workers the same
- D. Gives women workers the easy jobs, and the hard jobs to men

My supervisor is a man and he:

- E. Expects more from the women workers than the men
- F. Treats men and women workers the same
- G. Gives women workers the easy jobs, and the hard jobs to the men



Please rate the degree of importance of personal growth to you and your degree of satisfaction with it based on the following description:

PERSONAL GROWTH: To be able to develop individual capacities, education/training; making full use of my abilities; the chance to further my potential.

143. What degree of importance do you attach to the above?

A.....	B.....	C.....	D.....	E.....	F.....	G.....
Moderate			High			Very High
Importance			Importance			Importance

144. To what degree are you satisfied with the PERSONAL GROWTH aspects of your life?

A.....	B.....	C.....	D.....	E.....	F.....	G.....
Highly			Neutral			Highly
Dissatisfied						Satisfied

145. For the most part, how suitable for your needs was the course material in the NCO Orientation Course (Phase I, NCO PME)?

- A. Excellent
- B. Good
- C. Fair
- D. Poor
- E. Have not attended the course
- F. Not applicable, I am an officer

146. Overall, my attendance at the NCO Orientation Course (Phase I, NCO PME) was a good, useful investment of my time and effort.

- A. Strongly disagree
- B. Disagree
- C. Inclined to disagree
- D. Undecided
- E. Inclined to agree
- F. Agree
- G. Strongly agree
- H. Have not attended the course
- I. Not applicable, I am an officer

147. Air Force training programs do not do a very good job of preparing people to get along with other people.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

148. Technical School Training does not do an adequate job of preparing an airman for his first duty assignment.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

149. Basic Military Training does not do an adequate job of preparing airmen for their first duty assignment.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree



150. Today's Air Force training programs should devote some time to help prepare people to get along with each other better.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

151. Human Relations Education courses are effective in bringing about better working relations on the job.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

Please rate the degree of importance of the concept of personal standing to you and your degree of satisfaction with it based on the following description:

PERSONAL STANDING: To be treated with respect; prestige; dignity; reputation; status.

152. What degree of importance do you attach to the above?

- |            |        |        |            |        |        |            |
|------------|--------|--------|------------|--------|--------|------------|
| A.....     | B..... | C..... | D.....     | E..... | F..... | G          |
| Moderate   |        |        | High       |        |        | Very High  |
| Importance |        |        | Importance |        |        | Importance |

153. To what degree are you satisfied with the PERSONAL STANDING aspects of your life?

- |              |        |        |         |        |        |           |
|--------------|--------|--------|---------|--------|--------|-----------|
| A.....       | B..... | C..... | D.....  | E..... | F..... | G         |
| Highly       |        |        |         |        |        | Highly    |
| Dissatisfied |        |        | Neutral |        |        | Satisfied |

154. I have a lot of respect for most of the Senior NCOs (E7-E9) I know.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

155. Recent changes in Air Force personnel programs have been aimed at enhancing NCO prestige. Do you believe these efforts will be successful?

- A. Definitely yes
- B. Probably yes
- C. Undecided
- D. Probably no
- E. Definitely no

156. The prestige of the military has declined over the past several years.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

157. Most of the Senior NCOs (E7-E9) understand and are able to communicate with the people who work with them.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

158. Senior NCOs (E7-E9) are usually given jobs with less responsibility than they should have.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

Please rate the degree of importance of health to you and your degree of satisfaction with it based on the following description:

**HEALTH:** Physical and mental well-being of self and dependents; having illnesses and ailments detected, diagnosed, treated and cured; quality and quantity of health care services provided.

159. What degree of importance do you attach to the above?

- |        |            |        |            |        |            |   |
|--------|------------|--------|------------|--------|------------|---|
| A..... | B.....     | C..... | D.....     | E..... | F.....     | G |
|        | Moderate   |        | High       |        | Very High  |   |
|        | Importance |        | Importance |        | Importance |   |

160. To what degree are you satisfied with the HEALTH aspects of your life?

- |              |        |        |         |        |           |   |
|--------------|--------|--------|---------|--------|-----------|---|
| A.....       | B..... | C..... | D.....  | E..... | F.....    | G |
| Highly       |        |        |         |        | Highly    |   |
| Dissatisfied |        |        | Neutral |        | Satisfied |   |

161. Generally, how satisfied are you with the medical care you received at military medical facilities during the past 12 months?

- A. Highly dissatisfied
- B. Dissatisfied
- C. Neither satisfied nor dissatisfied
- D. Satisfied
- E. Highly satisfied
- F. Not applicable, did not visit military medical facility in past 12 months

162. Generally, how satisfied are you with the medical care your children received in military medical facilities during the past 12 months?

- A. Highly dissatisfied
- B. Dissatisfied
- C. Neither satisfied nor dissatisfied
- D. Satisfied
- E. Highly satisfied
- F. Not applicable

163. Generally, the amount of time I have had to wait for treatment at military medical facilities during the past 12 months has been reasonable.
- A. Strongly disagree
  - B. Disagree
  - C. Undecided
  - D. Agree
  - E. Strongly agree
  - F. Not applicable
164. Generally, medical personnel at military medical facilities are pleasant and concerned about patients.
- A. Strongly disagree
  - B. Disagree
  - C. Undecided
  - D. Agree
  - E. Strongly agree
165. Approximately how many times did you and/or your children visit a military medical facility during the past 12 months.
- A. None
  - B. 1-4 times
  - C. 5-8 times
  - D. 9-12 times
  - E. More than 12 times



COMMENTS SHEET

QUALITY OF AIR FORCE LIFE SURVEY

Please provide any comments which you feel would be of value to Hq USAF in our efforts to improve the quality of Air Force life. If you use this sheet, please detach it and return it with your answer sheet.

Grade: \_\_\_\_\_

MAJOR COMMAND: \_\_\_\_\_

THANK YOU FOR COMPLETING THIS SURVEY

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Captain Joseph W. Putt enlisted in the Air Force in 1962 and served as a jet engine technician working in-shop and flightline maintenance. He completed the Airman Education and Commissioning Program and graduated from the University of Arizona in 1974 with a BS in Business Management. He completed Officer Training School in September, 1974 and Aircraft Maintenance Officer Course in March, 1975. He then served as a C-130 flightline maintenance supervisor, avionics maintenance supervisor and as a Job Control officer. Captain Putt's next assignment will be to Tinker AFB, Oklahoma as a Maintenance Staff Officer for the C-5 Malfunction Detection and Recording (MADAR) system.

Captain Scott K. Williams graduated in 1969 from Western Washington State College, Bellingham, Washington, with a BA degree in Political Science. Upon completion of Undergraduate Pilot Training in 1971, he was assigned to Nakon Phanom RTAFB, Thailand as an AC-119K gunship pilot. This was followed by assignments to Fairchild AFB, Washington, as a KC-135 Aircraft Commander and as Chief, KC-135 Mission Development Branch. Captain Williams' next assignment will be to Headquarters, Strategic Air Command, Offutt AFB, Nebraska, as a Contingency War Plans Officer.